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ORIGINAL COMMUNICATIONS.

A Case of Encephaloid Tumour. By George L. Upshur, M. D., of Norfolk, Virginia.

Mrs. C——, the subject of this notice, was 73 years old on the 28th of February, 1848; of a sanguineous, lymphatic temperament, and originally robust constitution. She had not a gray hair in her head, and could see to do the finest needle-work without spectacles, having never been *near sighted.* For more than twelve years before her death, she was subject to a discharge from the vagina of a sanious fluid, unaccompanied by pain, or other unpleasent sensation, and apparently without detriment to her general health, which, until April, 1847, had been uninterruptedly good.

About the beginning of April, she felt upon the scalp, just over the left parietal protuberance, an intensely burning, itching sensation over a surface about as large as a shilling. The part soon became red and tumid, and the inflammation extended rapidly over the whole scalp and upper part of the face. Her medical attendant pronounced it a case of erysipelas, and so treated it. In a few days the inflammation subsided entirely, when there was observed

upon the spot where the erysipelas first appeared, a small, well defined tumour, about the size of a pea, apparently just under the skin, and very movable. Four weeks from this time—about the middle of May, 1847—the tumor was as large as a marble, and the physician in attendance, taking it for a simple furuncle, made a free incision into it, from which there flowed out only a little blood. The tumour now commenced to grow rapidly, and, by the end of July, was as large as a walnut, and hard like a wen. About this time, she commenced to feel in the part some pain of a lancinating, gnawing character, for the relief of which she was advised to use emollient poultices, which she did, but without benefit.

On the 23d of November, I saw the tumour for the first time, and examined it carefully. It had then attained a very considerable size, being cylindroid in shape, and measuring eleven inches in circumference, and seven inches from side to side across the summit. It was soft at the apex, and elastic to the touch throughout, slightly movable apparently beneath the skin, and covered with hair as the other parts of the head. The patient had lost flesh and strength within the past four months, and was frequently kept awake by pain in the tumour, which extended down the left side of the neck and arm. Her appetite, however, remained as good as usual, and all the functions both of mind and body were well performed.

Dr. Silvester saw the case with me about the first of December, and made very firm pressure upon the tumour without producing any effect upon the brain. He looked upon it as a melicerous lypoma, and recommended its extirpation. On the 9th of December, Drs. Moore, Tatem and Wright saw the case, and examined it carefully. Dr. Wright did not give an opinion. Dr. Tatem thought that it was a non-malignant tumour, encysted, and filled with a semi-fluid matter, that might readily be let out by a puncture. Dr. Moore, who made a more minute examination into the general health of the patient before and after the appearance of the disease, was of the opinion that it was malignant in its character—probably the *soft cancer* of some authors. We all agreed that extirpation offered the only hope of curing the disease.

Dr. Andrews saw the patient on the 11th of December. He agreed with Drs. Silvester and Tatem as regarded the nature of the tumour, and attributed the pain which she suffered to distension

of the integuments of the head and pressure upon the adjacent parts;* and advised, that a puncture should be made into the tumour, the contained fluid let out, and pressure exercised upon the part. Should it re-appear it was again to be punctured, and the cyst injected with some stimulating fluid, as in the radical cure of hydrocele.

Accordingly, on the afternoon of the same day, in the presence of Dr. Moore, I made an incision, with a straight bistoury, about half an inch long, on the left side of the tumour, a little below the summit. There appeared a little blood from the cutaneous vessels, and nothing else. Dr. M. then introduced the canula of a small trochar about three inches into the tumour, and moved it about in every direction. Slight pressure upon the sides ejected, with considerable force, several lobules of semi-soft matter, taken at the time for fat, and a considerable amount of blood. The wound was now closed without further exploration, the patient having lost about four ounces of blood.

Upon washing the pieces discharged, we found that they were not fatty, but fibrous in some points, and resembled cerebral matter in others.

The tumour being now ascertained positively to be malignant, I determined to state fairly the advantages and dangers of an operation for its removal, to the patient, and to give her the election. Having told her, that the tumour, if permitted to remain, would certainly destroy life in a short time, and that the remnant of her days would be passed in great pain—while on the other hand, she might perish under the operation, or from the effects of it; and after all, if extirpated, the tumour might return either in the same place or elsewhere;—she replied, "I would prefer to die under the knife rather than to suffer what I have suffered for the past ten days—I want it cut out."

I now determined, in order to ward off as far as possible the shock of the operation, to administer the vapor of sulphuric ether, it having been ascertained from several previous trials that the patient could be easily brought under its influence, and could be kept so for at least one hour without unpleasant effects.

* I am thus minute in giving the opinions of the medical gentlemen who saw the case, in order to show how much difficulty was attendant upon making a correct diagnosis. Upon this fact I base in part the propriety of the subsequent operation.

On the 18th of December, the patient was placed in a recumbent position, and the ether administered by Mr. T. G. Clayton, dentist. For the first five minutes it had an excitant effect, quickening the pulse, and causing the patient to laugh immoderately. In the course of five minutes more, the pulse became slower, without loss of volume, and the patient was fully under the influence of the agent.

In the presence of Drs. Andrews, Moore and Tatem, (being assisted by the two latter) and Mr. T. W. Upshur, medical student, I commenced the operation by making two elliptical incisions across the tumour antero-posteriorly. Having dissected off the scalp as far as the base of the tumour on either side, an effort was made to tear it up from the base with the handle of the scalpel, but it adhered to the pericranium so closely that this membrane seemed to form the base of the cyst. It was dissected up from the skull, the bone beneath, over the entire surface upon which the tumour rested, being as rough as if it had been rasped. Just in the centre of the base, for an inch and a half in diameter, both tables of the skull were gone, and the cyst had passed through the opening and adhered to the dura mater. The brain could be plainly seen pulsating through the hole, the edges of which were very rough.

About eight ounces of blood were lost during the operation, chiefly from branches of the temporal and occipital arteries. There was so much oozing of blood from the opening in the cranium that it was impossible to distinguish the portion of the cyst which rested upon the dura mater from that membrane itself, and therefore no effort was made to detach it. The wound was dressed by filling it with charpie, applying a compress over it, and covering the whole with a spica bandage, drawn sufficiently tight to arrest the hemorrhage.

As the last turns of the roller were applied, the sponge was taken from the patient's nose. In a few moments, she came to herself, and said to me, "Do not put my cap on until you have taken the tumour off, for I have determined to have the operation performed to-day, and I want it done." She was surprised when told that the tumour was off, and would not believe it until assured of the fact by her grandson, who was present. She was under the influence of the ether one hour and a quarter. Three hours

after the operation, the pulse was perefctly natural, and the patient rested better the following night than she had done for six months.

On the 24th of December the dressings were first removed. The wound exhaled a very fetid odour, but exhibited several healthy granulations at its edges. The perforation was completely filled up with encephaloid matter and coagula, beneath which the pulsation of the brain, synchronous with the pulse, was very perceptible. A portion of this matter was torn off, when hemorrhage ensued, and it was deemed prudent to re-apply the dressings. They were lighter than in the first instance.

On the 26th, again dressed the wound. It was still very fetid, and discharged a sanious pus. Applied to it a solution of creasote. 28th.—Perforation filled with a fungous growth, lobulated, rising above the surface of the skin and bleeding freely upon being punctured or roughly handled. The edge of the skin next to the sagittal suture was partially everted and unhealthy in its appearance, and there was a portion of cancerous matter at the anterior part of the wound, running gradually into the healthy granulations on one side, and somewhat overlapped by the skin on the other. The edge of the wound next to the temple was very healthy. Applied sulphate of copper to every part of the diseased mass.

On the 29th I removed a portion of the fungus as large in extent as a shilling, and applied powdered sulphate of copper to every part where there were remains of the cyst. The patient's appetite, strength and spirits remained good.

On the 5th of January the fungus had attained the size of the bottom of a tumbler, and being extremely vascular, an effort was made to coagulate the blood in the nourishing vessels by plunging heated needles in every direction through the base of the fungus. This seemed, however, to exercise but little influence over its growth.

On the 13th I passed a common thread ligature around the base of the fungus, and twisted it off without any difficulty. A surface was thus exposed as large almost as the original wound, which bled very freely. The hemorrhage was arrested promptly by the sulphate of copper in powder. The patient suffered but little pain in the wound, and had not lost strength or flesh since the operation.

From this time until the 9th of March, the wound was dressed every second day, and at each dressing I removed with the scalpel a portion of the fungus as large as a dollar, and applied to the cut surface the actual cautery, and over the whole mass, concentrated nitric acid. I was thus enabled at every dressing to remove with the forceps a considerable slough; so that the amount removed, by scalpel and forceps, was more than equal to the increase. On the 9th of March the appearance of the wound was cupped, the bottom of the depression being one inch and a quarter below the healthy surface of the head, and surrounded by a margin of healthy granulations mingled with small fungi of encephaloid matter. There was very little vascularity in any portion of the wound, and the patient was stronger and in better spirits than usual. I filled up the depression with melted wax, so as to permit the acid to remain upon the margins; and left the patient with a slight hope that at length the morbid growth was somewhat under my control. Up to this time, absorption of the bone had been going on steadily, so that the diameter of the perforation was at least two inches.

Early on the morning of the 10th of March, I received a message that the patient was dying. Found her senseless, with a labored respiration, slow, feeble pulse, and partial paralysis of the right side. These symptoms came on without premonition. Thinking that probably the bandage was so tight as to produce pressure upon the brain, I took off the dressings, but with no amelioration in the symptoms. She remained in this condition twenty-four hours, when there were signs of returning consciousness. Gradually she regained the use of the right side, so that on the 15th she was entirely rational, and in as good condition, to all appearances, as before the advent of these anomalous symptoms—with the exception of a partial loss of control over the tongue, which at times prevented her from making herself understood, and which continued until the 1st of April. During the interval, from the 10th to the 15th of March, the condition of the patient was such, that no attempt was made to remove portions of the fungus. The dressings were changed simply from motives of cleanliness.

From this time, the fungus seemed to be endowed with new life, and its growth was rapid beyond conception. During the five days before mentioned, the depression was completely filled up, and the whole diseased mass was more vascular than I had ever

seen it. About the middle of April I excised a piece as large as a shilling, and there was a jet of blood from an artery the "size of a crow quill," besides a rapid effusion of blood from several smaller vessels, to arrest which, the actual cautery, sulphate of copper, nitric acid, and compression were successively resorted to. This condition of the fungus, coupled with the fast failing strength of the patient, deterred me from a further resort to the knife, and I was forced to content myself with passing ligatures around different portions of the mass, and gradually tightening them at each dressing, so as to produce in the end sufficient strangulation to make them slough.

May 1st.—Up to this time the patient had taken various tonic and alterative medicines, among which were the chalybeates and sarsaparilla, but without perceptible benefit. The lemon colour of the skin, so characteristic of cancerous disease, was well marked, and she commenced to suffer considerable pain of a lancinating kind through the temples and around the tumour. The lymphatic glands on the left side of the neck also became enlarged and painful. Her appetite still remained good, but her spirits were flagging, and she had lost flesh and strength since the first of February. The fungus was circular, and extended from the crown to the upper part of the ear anteriorly, and to the root of the neck posteriorly. It was lobulated about two inches above the healthy surface, and discharged a large amount of muddy serum mixed with blood,—so as to saturate several layers of thick cotton cloth in twenty-four hours.

Throughout the entire course of the disease, there was exhaled from the fungus a most intolerable odour. I do not know how I can better describe it than to say, in the quaint language of a professional friend, who saw the case frequently, that "it was a *violent* stink." To control this, creasote, pyroligneous acid, and chloride of soda were freely used, but with little or no effect. The creasote was most effectual.

On the 15th of May I discovered, for the first time, maggots in the tumour, upon which, nitric acid, and a solution of sulphate of copper, and pyroligneous acid had little or no effect. At the next dressing, I applied powdered camphor to the part, after which I saw no more of the worms, except now and then two or three in places where it was difficult to apply the camphor. The camphor also seemed to lesson the fetor to a considerable degree.

About this time partial hemiplegia of the right side supervened, the mind being perfectly clear. Diarrhœa came on about the 1st of June; the appetite failed suddenly, and the patient died on the 10th of the month, having retained her consciousness up to the last moment.

Autopsy fourteen hours after Death.

General Appearance.—Countenance tranquil; great emaciation; body would not weigh more than 100 pounds. The straw colour of the skin well marked.

The bandages being removed from the head, there appeared a soft, lobulated vascular mass, interspersed with fibrous septa, and weighing about two pounds. It was circular, about eight inches in diameter, and, from its own weight and decomposition of its fluids, was readily separated with a little dissection.

Beneath this fungus and forming its base, was seen a mass of cerebriform, fatty looking matter, which occupied the perforation in the bone and extended beyond its margin, thus shutting out from view the dura mater and brain.

Having made a lateral incision through the scalp from ear to ear, and turned down the flaps behind and before, a view of the calvarium was obtained, which brought out in higher relief the cerebriform mass alluded to above. Around the perforation was a circular sulcus or depression produced by absorption of the bone, the result of pressure of the tumour. This depression was deepest on the posterior superior margin, just where the largest portion of the tumour rested.

Upon removing the calvarium, a full view of the opening in the parietal bone was obtained; this opening was elliptical in shape, 3 by 2½ inches in extent, with margin serrated and thinned by absorption. Just beneath, and contiguous to the perforation, the dura mater was thickened, diaphanous, slightly injected; and the great middle arteries were deeply imbedded in the parietal bone, and were much larger than natural. They, no doubt, contributed considerably towards the nourishment of the tumour. The diploë, as seen upon the edges of the opening, was completely saturated with true encephaloid matter.

The dura mater was now lifted off, and on its inferior side, immediately in the axis of the original tumour, a perforation was found, measuring in extent one inch by one inch and a half. Just

beneath the dura mater, and on each side of the perforation, there was a nascent, lardaceous cerebriform tumour, about the size of a walnut, surrounded by tumours of the same kind, five or six in number, and varying in size from a small pea to a filbert. These masses were half imbedded in the posterior lobe of the left hemisphere, the convolutions of the brain overlapping the two large ones on either side a good deal like the anterior portion of the left lung overlaps the heart. They were attached to the brain by very fine, delicate, cellular tissue, and being lifted from their beds, adhered loosely to the under side of the dura mater.

The pia mater and arachnoid, contiguous to this portion of the brain, were slightly injected, but there was neither rupture nor erosion of them, nor was there the slightest alteration of the cerebral substance beneath the tumours. The convolutions at the bottom of the depressions were as distinct as in any other portion of the brain. The cause of the hemiplegia was completely demonstrated by the partial invagination of these masses, and the consequent displacement of the cerebral lobe.

The brain generally was in a healthy condition, except a more than ordinary fulness of the venous system, and a deposition of minute white points along the longitudinal sinus supposed to be concretions of lymph, or encephaloid matter.

It is to be regretted that want of time prevented us from examining the thorax and abdomen. I doubt not that cancerous matter would have been found in the viscera of both cavities, especially in the mesenteric glands.

Remarks.—The best surgeons of the present day agree in the opinion, that when a tumour is ascertained to be cancerous—unless it be scirrhus, in its earliest stage—removal by the knife, so far from prolonging life, actually shortens it, especially if the dangers of the operation be taken into account. "Of 1172 patients, the subjects of cancer, not operated on, 18 lived more than thirty years after the first appearance of the disease; whilst of 801 operated on by excision or caustic, the existence of 4 only was prolonged for a similar time. 14 patients operated on, and 34 not operated on, lived from twenty to thirty years; and 88 in the first category, and 228 in the second, lived from six to twenty years after the first appearance of the disease."* While I am far from

* Cyclop. of Prac. Med., *Art. Scirrhus.*

desiring to dissent from the conclusion which must necessarily be drawn from these statistics, I believe that the operation performed in the case above detailed was justifiable. The position of the tumour; its rapid growth, producing great pain from distension of the surrounding integuments alone; the rapid absorption of the bone, giving rise speedily to perforation, pressure upon the brain, and death—together with the earnest desire of the patient to have it extirpated—seemed to justify a resort to the knife. And when it is remembered, that from the puncture of exploration there had sprouted out a vascular fungus, which bled upon the slightest touch, the operation was imperiously called for. It is true the patient was 73 years old; but then, her system had not been materially weakened, and she was in a better condition to undergo an operation than most persons are at fifty. I have no doubt but that her life was lengthened one or two months, at least, and that she suffered less pain than she would have suffered without the operation.

This case presents another instance of the value of anesthetic agents in surgical operations. The ether undoubtedly saved the patient from a shock, which, considering her age and temperament, might have been fatal. The length of time, too, that she was subjected to the influence of the agent, without the supervention of a single unpleasant symptom, argues strongly in favour of its harmlessness when properly exhibited. I do not believe the chloroform, the effects of which I have frequently witnessed, would have acted so pleasantly in this case as the ether—nor do I like it as well as the ether, under any circumstances.

Where did the tumour originate? within the cranium or external to it? We can merely speculate upon this subject. It is not impossible to conceive of a morbid growth within the cavity of the cranium developing itself to such an extent as gradually to perforate the bone and show itself externally, without producing fatal lesion of the cerebral mass. It is well known that the root of a tree will run beneath a stone wall, and as it increases in size, will lift the wall without making any perceptible impression upon the soft earth beneath. And in the case before us, we have seen the hard and apparently unyielding internal table of the scull give way before the expansion of an artery. Reasoning, therefore,

from analogy, it would not be impossible to believe that the tumour commenced in the dura mater.

In opposition to this, however, it may be stated, that, on the first of December, when the tumour was large and fluctuating in every part, firm pressure upon it did not disturb the functions of the brain; that at the time the operation was performed, the perforation in the bone was not at all in proportion to the size of the tumour; that the pericranium formed the *base* of the cyst, instead of covering the upper portion of the tumour only, as would have been the case had the disease originated internally; that the patient had never suffered from headache until the tumour was as large as a walnut; and, that the occipital and temporal arteries—*external vessels*—contributed chiefly to the nourishment of the tumour. Add to this the fact, that when first observed it was very small, which is almost incompatible with its internal origin. Instead of a small, round, distinct tumour, there would first have appeared upon the scalp a slight elevation, undefined in its outlines, which by gradually increasing would at last have shown itself in full relief. Had it originated internally, it would have been perfectly immobile, but we learn that from the first it could be pushed about, to some extent, beneath the skin.

From a review of the whole case, I conclude, that the disease originated in the pericranium, and that if the operation had been performed before the bone was much involved, or the system became tainted, there would have been no return of the disease.

I am indebted to my friend Dr. Wm. J. Moore for the notes taken at the autopsy; and to my pupil and kinsman, Mr. T. W. Upshur, for valuable aid in the application of the dressings throughout the treatment of the case.

Norfolk, (*Va.*,) July 6th, 1848.

Case of Twins, of Extraordinary Size. By P. G. Bertolet, M.D. of Oley, Pennsylvania.

Early on the morning of the 15th of April, 1848, I was requested to meet Dr. Thompson in consultation, at five o'clock, in the following case:

Mrs. A. H., in her sixth labour, was seized with regular pains at 10 o'clock on the previous morning, and at 2 o'clock, after

having been in labour four hours, was delivered of a fine, vigorous female child. The vertex presented to the left acetabulum, and the infant, after it was born, weighed nine and a half pounds. The labour pains then ceased for a time, but soon recurred with increased violence. Upon examination, the right hand of another child was discovered, high up in the vagina; this was returned within the uterus, after which the vertex presented very nicely in the second position at the posterior strait. We now had hopes that all further assistance would be unnecessary, but after waiting for a considerable time, the head still continued in exactly the same situation. There had been a constant flow of blood from the time the first child was born, and the patient's strength was becoming exhausted. I succeeded in applying the *long forceps* after some difficulty, and soon delivered the lady of a male child of unusual size; it was still-born, and weighed eleven and a quarter pounds, making an aggregate weight of twenty and three-quarter pounds contained in the uterus beside the secundines.

After the second delivery the hemorrhage ceased, and no unpleasant symptom occurred to retard the quick recovery of the patient. Both mother and child are now perfectly well.

Mrs. H. has had previously to the above, five natural labours and two abortions, immediately preceding her last accouchement. All this took place within twelve years; if she had been safely delivered, at full term, in all these cases, therefore, she would have had nine children.

Case of a Large Tumour involving the Superior Maxillary Bone, removed by Prof. Pancoast *at the Clinic of the Jefferson Medical College.* Reported by James V. Patterson, M. D.

Rachel Flora, æt. 18, a strong, healthy coloured girl, residing in Bucks Co., Pa., had suffered from the presence of an epulis tumour of the upper jaw for the last ten years.

When she was two or three years old, and then living in Virginia, she had a tumour of the same description removed from her upper jaw by a physician of that State; but after an interval of three or four years it returned again, and has been gradually increasing, until it has attained its present size. The tumour as it

now appears, extends from the anterior part of the superior maxillary bones, across the mouth, as far back as the epiglottis, being attached in front to the alveoli of the incisor teeth, and behind to the palatine processes of the superior maxillary, filling up the cavity of the mouth, and materially interfering with respiration and deglutition, so that for the last few months the patient has been nourished entirely by liquids. In its character, the tumour evidently belonged to that class of tumours known under the name of erectile, vascular in its nature, swelling up and pulsating forcibly under the least excitement of the circulation, so as to threaten the patient with suffocation. Only a few days after her arrival in this city, she had an attack of hysteria, during the paroxysm of which, the tumour swelled up to such an extent, as to endanger her life by suffocation, and to demand the free use of the lancet.

As the removal of such a vascular mass would necessarily give rise to a great amount of hemorrhage, it was deemed expedient and requisite to tie the primitive carotid artery of that side; for the ligation of the external carotid alone would not suffice, as there existed such a free anastomosis between the vessels of the external and internal carotids, secondary hemorrhage would be likely to take place, which might prove fatal. Accordingly, on the 6th of November, Prof. Pancoast, in the presence of the class, performed the operation for ligation of the primitive carotid on the left side, after the usual manner, and succeeded in throwing a ligature around the artery, though the struggles of the patient and the great fear lest she should have a hysterical convulsion during the operation, made this a rather difficult undertaking. Everything went on favourably, and in the course of two weeks she was prepared to have the whole tumour removed.

On the 20th of November, the patient having been brought into the amphitheatre, Prof. Pancoast removed the whole of the diseased mass after the following manner:

The face being placed opposite a strong light, and the head of the patient supported against the breast of an assistant, an incision was made through the cheek, from the left angle of the mouth, in a semicircular direction, towards the outer canthus of the eye, after the manner of Velpeau's operation, so as to avoid wounding the parotid duct and the portio dura nerve.

The flap was then rapidly dissected back from the bone, and with a small saw the superior maxillary was divided transversely by an incision parallel to the alveolar processes, then with a strong pair of cutting forceps a vertical incision was made through the bone at each end of the transverse, one by the side of the last incisor tooth on the right side, and the other by the last molar tooth of the left, and the mass, thus isolated from its bony attachments, was quickly removed. The hemorrhage following was restrained by the use of the actual cautery; and the wound having been plugged with lint, the lips of the incision were united by hare-lip suture and adhesive strips, and the patient placed in bed, and ordered to live on a liquid diet.

The wound in the cheek healed up by first intention in five days, and, on the tenth day after the operation, the condition of her mouth was such that she was enabled to eat meat, a thing which she had not done before for several months. The wound of the jaw rapidly filled up with healthy granulations, and in three weeks after the operation she was discharged cured. The ligature of the carotid came away on the 30th of December, and in the first week of January she returned to her friends in Bucks County, highly pleased with the results of the operation.

BIBLIOGRAPHICAL NOTICES.

Principles of Medicine, comprising General Pathology and Therapeutics, and a brief general view of Etiology, Nosology, Semeiology, Diagnosis, Prognosis and Hygienics. By Charles J. B. Williams, M. D., F. R. S., Fellow of the Royal College of Physicians, &c., &c. *Edited, with additions, by* Meredith Clymer, M. D., Fellow of the Philadelphia College of Physicians, late Professor of the Principles and Practice of Medicine, and of Clinical Medicine, in the Franklin Medical College: Consulting Physician to the Philadelphia Hospital, &c., &c. *Third American from the Second and enlarged London edition.* 8vo. pp. 440. Philadelphia. Lea & Blanchard: 1848.

We have before directed attention to the valuable work of Dr. Williams with the appropriate additions to it by the capable American editor. If it were then worthy of commendation, it is still more so now. It is a work of thought,—of thought suggestive of observation, and of thought suggested by observation; and is, consequently, eminently progressive in its tendency and scope. "It possesses," the American editor remarks, "the strongest claims to the attention of the medical student and practitioner, from the admirable manner in which the various enquiries in the different branches of pathology are investigated, combined, and generalized by an experienced practical physician, and directly applied to the investigation and treatment of disease."

An editor may naturally be supposed to be biassed in favour of the work to which he is sponsor and prolegomenon. No one, however, is better qualified to appreciate such a production than he who acts as such on the present occasion. As Professor of the "Principles" of Medicine in the Franklin Medical College, the whole subject must have fallen under his serious attention, had not his studies previously led him in that direction. We know, however, that at all times the investigation of the phenomena of disease, and of the laws of those phenomena, has been closely and successfully pursued by him; and hence no one could have been selected with more—and few with as much—propriety

to edit a work like the one before us. Of the nature and character of this work we shall not repeat what was said by us of the former editions. The author affirms that he has made "very extensive additions" to the present issue, comprising the enumeration and application of most of the facts and established deductions made available to the science and art of medicine during the last few years. These additions pervade almost every portion of the work; but they preponderate in the following subjects:

"In Etiology, *mechanical*, *chemical*, and dietetic *causes of disease*, *defective cleanliness*, *ventilation*, and *drainage*. In Pathology, the tabular views of the elements of disease; *reflex action and sympuathy; elementary changes in the blood; congestion; determination of blood; inflammation* in its nature, manifold results, and modes of treatment; *degeneration of textures; cacoplastic and aplastic deposits*, and their treatment, with a notice of the action of *cod liver oil;* and the whole chapter on *Hygienics*, comprising *food*, *clothing*, *air*, and *temperature*, *exercise*, *mental occupation*, *sleep* and *excretion.* p. vii.

"The chief additions by the editor will be found in the sections on Etiology, Diseases of the Constituents of the Blood, Nutrition, Semeiology, Prognosis, and Hygienics. The section on Semeiology has been considerably enlarged, and an abstract of the general signs of disease added."

We once more, and not—we trust—for the last time, commend this work to the attention of our readers. It is one of the few productions to which they can refer with satisfaction for the expositions of a sound and rational pathology.

Medical Chemistry for the use of Students and the Profession; being a Manual of the Science, with its applications to Toxicology, Physiology, Therapeutics, Hygiene, &c. By D. P. Gardner, M. D., Formerly Professor of Chemistry in the Philadelphia College, and of Chemistry and Natural Philosophy in Hampden Sydney College, Va.; Corresponding Member of the Lyceum of Natural History, New York. Small 8vo. pp. 396. Philadelphia. Lea & Blanchard: 1848.

We are now well supplied with "Manuals" of Chemistry; and so long as useful novelties are produced, we are neither disposed to cavil, nor to enquire too closely whether they be indispensable or advisable. Every such production must contain something

valuable; and it must be borne in mind that they are not written for the expert, but for those who are desirous of being made so.

The work before us differs more perhaps in title than in execution from the ordinary manuals of chemistry—for it must of necessity treat of the fundamental phenomena, and, to a certain extent, of the laws of such phenomena. Accordingly, after an Introduction, in which the properties of matter and specific gravity are investigated, we have Part I., which considers the "Chemical Forces"—under the heads of heat, light, electricity, galvanism, animal galvanism and affinity. Part II. follows, which investigates "the simple bodies of greatest importance." Part III. treats of "organic chemistry," from which—and we cannot see the reason—the author separates Part IV., which is devoted to "Animal Chemistry." Part V. considers the metals, with the exception of arsenic and antimony, which are classed with the simple bodies in Part II. We do not think the classification a happy one: but this is of minor importance.

The author has long studied and taught the department of science on which he now writes, and is doubtless familiar with it. We have no question, therefore, that his work may be regarded as an accurate exposition of most of the topics which it embraces. We have not had opportunity, however, to examine closely into this matter; and have turned mainly to one or two points of interest connected with the application of chemistry to medicine.

It may be recollected, that some years ago Dr. Gardner published an article in the "American Journal of the Medical Sciences," in which he suggested, that sulphuretted hydrogen might be an active ingredient in malaria. Since that time accurate observation has exploded the notion. We were, therefore, curious to know what are his present views.

"*Malaria.*—The Italian writers have for some time suspected a connection between the presence of sulphur, and the poisonous atmosphere (*malaria*) which produces bilious remittent and intermittent fevers. The late Professor Daniell found sulphuretted hydrogen in the waters taken from the most sickly portions of the African coast" [Dr. Gardner has omitted to state, that the gas was not discoverable in the waters when taken from the river, but was the product of after decomposition] "and Dr. Marcet in those from the Chinese coast, which is equally unhealthy. I have succeeded in detecting the presence of this body, both in the air and waters of

marshes and shallow streams in Virginia, and in locations where bilious remittent fever was active. (See the American Journal of the Medical Sciences, January, 1842.) I do not, however, agree with Prof. Daniell and others, that sulphuretted hydrogen is the malarious body, but believe, that sulphur is a component of a certain unstable organic body, which constitutes the poison. This organic body may be obtained by precipitating the vapour from a marsh, in the morning before sunrise, and it blackens sulphuric acid. It consists of sulphur, carbon, hydrogen, and probably of oxygen. It readily decomposes, emitting a putrid odour, and appears to be decomposed by the rays of the sun. It is destroyed by fire, does not rise high in the air, is decomposed by plants, which appear to remove its water, an essential ingredient of the body.

"This substance entering the lungs, is probably decomposed into sulphuretted hydrogen, carbonic acid and water. Hence" [?] "the sulphuretted hydrogen is most probably the noxious body; this enters the circulation, affects the blood, produces nervous symptoms, which have the intermittent or remittent type, affects the liver, and, if taken in large quantity, produces nervous and vascular prostration, with all the symptoms of yellow fever [!]. These would be the effects of sulphuretted hydrogen [!!]. The best remedies, calomel, and, in chronic cases, nitro-muriatic acid, both contain chlorine. The first of these is decomposed in the body, and they both evolve chlorine, which, as we have seen, neutralizes the poisonous properties of sulphuretted hydrogen."

Yet all this is the merest hypothesis, possessing none of the exactness that ought to appertain to a chemical investigation. Independently of all idea of the agency of sulphuretted hydrogen in the production of periodical fevers having been abandoned by almost all its supporters, and considered to rest on scarcely a particle of foundation; the author appears to be of opinion, that intermittent and remittent and yellow fevers are all producible and produced by the same malarious emanation, in favour of which view we know of neither facts nor arguments!

We do not think that physiology has engaged as much of the author's attention as chemistry. So at least we should judge from the evidences afforded in the volume before us. For example, after all the information obtained, from time to time, of the value of the saliva in digestion, he seems to have made up his mind that it is essential to human digestion, on the strength of a single case.

"The absolute necessity of the saliva has been occasionally proved in cases where the secretion was diminished or destroyed

from disease of the glands. Professor Pattison saw a striking instance of this fact, in the case of a man who had cut his throat, and in whom the wound remained open for a long time. Nutritious food was administered by the severed orifice of the œsophagus, but the man rapidly wasted, and was on the eve of death from emaciation. It was observed, that whenever his meals were presented, an abundant discharge of saliva took place and ran out of his mouth, for he had lost the power of swallowing. The secretion had been formerly thrown away, but in consequence of his emaciated condition, attention was turned to it, and the Professor suggested that it should be collected, and introduced along with the food into his stomach. From this time the man improved, and finally recovered his health. *From this striking case it will appear that the saliva is essential to digestion in man.*" p. 318.

Dr. Gardner *decides*, with Blondlot, whom he repeatedly calls *Blondot*, and Berard and Barreswil, that the acid reaction of the gastric juice depends upon the presence of the acid phosphate of soda or lime, and free lactic acid. "Neither free hydrochloric nor acetic acids [acid] exist [exists] in the stomach." Not a word is said of the experiments made in this country on the only case perhaps in which the gastric secretions of man have been obtained in the best state for examination—we allude to that of San Martin, the Canadian. In those secretions free muriatic acid always seemed to exist.

On the subject of endosmose and exosmose we expected more detail than Dr. Gardner has given. He passes by without notice the recent researches of Matteucci, in the interesting little volume reprinted in this country, which led to the conclusions in relation to the agency of the septum, which we gave in the "Examiner" for February last, (p. 114.)

The very recent work of Liebig on the motion of the juices doubtless had not reached the author when he penned his observations on this topic.

On the whole, perhaps, the greatest objection to Dr. Gardner's physiological inferences is the hasty deduction from chemical premises by no means established, yet enunciated by him with all the confidence which the exact sciences alone authorize. This has been a common error of the chemists, and it applies strongly to Liebig himself, who, in many instances, has arrived too speedily at his deductions; and has thus tended to diminish the confidence of the unreflecting in a branch of science important above all

others in enabling us to unravel the phenomena of living bodies, inasmuch as there is probably not a change nor motion—the result of living action—that is not chemical in its nature.

We observe typographical errors, which the author will have, we hope, an opportunity of correcting in a future edition. Proper names are, at times, inaccurately given. Blondlot, as we have seen; and we notice Majendie and Despetz, for Magendie and Despretz.

Lectures on the Theory and Practice of Physic. By JOHN BELL, M. D., etc., etc., and WILLIAM STOKES, M. D. etc., etc. Fourth edition, revised and enlarged. In two volumes, 8vo. Ed. Barrington and Geo. D. Haswell. Philadelphia, 1848.

These ponderous volumes contain seventeen hundred and sixty pages, of which more than fourteen hundred are from the pen of our learned and industrious countryman. Dr. Bell has the gratification of knowing, from the rapid sale of the former edition, that his great labour has been rightly appreciated by the profession, and that BELL AND STOKES'S LECTURES now rank among the standard works of the day.

In the Preface we are informed that the present edition has been revised with considerable care, and many of the subjects—such as *Epidemic Cholera, Diseases of the Urinary Organs, Diseases of the Female Organs of Generation, Pulmonary Consumption, Diseases of the Heart, Meningitis* (*Simple and Tubercular*), the *Exanthemata*, and *Fevers*—have been recast. Others are introduced for the first first time, viz., *Diseases of the Eye, Diseases of the Bloodvessels*, and *Dropsy*.

We cannot pretend to examine the Lectures on these various subjects in detail, but it would be wrong to pass over some of them without a brief notice.

The whole subject relating to epidemic cholera, which, from its threatening progress in the north of Europe, is now occupying a large space in European journals, is thoroughly investigated. Dr. Bell is a believer in some peculiar atmospheric change or condition as a general predisposing cause, as in the case of influenza, catarrh, &c., and an utter unbeliever in its contagious nature.

"The shortness of duration of epidemic cholera in a place, the suddenness and rapid diffusion of the disease beyond what could occur from personal intercourse, and its entire disappearance, are facts adverse to a belief that it is contagious. To the same purport is the disorder of the digestive organs among the inhabitants, preceding its regular attack, and anterior, also, to any imputed importation or intercourse of any kind with the sick in other parts."

Much attention is given to diseases of the respiratory organs, and especially to phthisis. The nature, causes, and formation of tubercle, in the lungs and various other parts of the body, is full and complete; indeed, we know of no better treatise on the subject than is contained in these Lectures. In the Lectures on *Diseases of the Eye*, *Diseases of the Bloodvessels*, and *Dropsy*, which are contained in this edition, but not in those which preceded, we have observed nothing special to remark. The subjects are treated in the same clear and satisfactory manner observable on other topics, on which the author's personal experience enables him to speak with more authority.

As might be expected, the great object of giving a true account of our present knowledge on the various subjects treated of, instead of affected originality, is conspicuous throughout. To use the author's own language: "In the performance of his task, the American contributor has not been backward in adducing his own experience, or in the independent expression of his own matured convictions; but, at the same time, he disclaims the particular absurdity of professing to write an original work on the practice of medicine. When the materials are in such large proportion common to all, a self-attribution of originality may well create suspicion of the want of good sense, if not of good faith, of the claimant. As well might we look for an original cyclopædia, or an original dictionary. How small, in the nature of things, is the amount of positive knowledge, verified by actual observation and experiment, peculiar to any single inquirer, however industrious and conscientious he may be. Still smaller must be the proportion of real discovery, originating with himself. He, therefore, who would obtain credit for an original work on the pathology and treatment of the several diseases included in the nosological catalogue, or even the chief of them, written with an

approach to the minuteness of detail met with in the systematic treatises extant, must either draw largely from his imagination or be inspired. He must write a romance, or be favoured with a special revelation."

No well informed man can doubt the correctness of these remarks, or the justness of the rebuke which they administer to that small fry of critics who affect to despise every thing that does not pretend to originality. With such, the labour and judgment employed in collecting the materials which lie scattered and useless, and the genius and knowledge required to combine and arrange them for useful purposes, is nothing. The architect who constructs the convenient edifice is a useless being in comparison with him who digs the sand or quarries the stone. The jewel of philosophy is due to him who first *saw* the apple fall, and not to the mind that deduced from that fact the great physical law! From critics of this description, Dr. Bell need expect nothing but abuse. He will be denounced as "*a compiler*"—"*a book worm*"—"not original"—"not a practical man"—by some who will forget, if not ignorant of, the truths conveyed in the remarks we have quoted. He may expect, indeed, whenever the occasion presents, to find himself branded as we have mentioned, or perhaps stigmatized as a plagiarist, and long extracts from his volumes detailing the symptoms of intermittent fever, or pleurisy, or jaundice, with corresponding passages from Louis, or Cullen, or, it may be, Hippocrates, torn from their proper connection and made to stare most knowingly at each other in parallel columns! To such reviewers we commend a further extract from our author's Preface.

"Some writers deceive themselves, if not their readers, into a belief that, if they use their own language, they give a stamp of originality to ideas derived from the common stock. They forget, that a temporary control of the mint and the imprint of their effigy on the coin, are not the circumstances on which depend its intrinsic value and currency. A desirable homogeneousness of appearance is obtained by a certain unity of style; but it may still be questioned, whether a description of disease is less vivid in the very words of Cullen, or a matter of fact is less tersely expressed in those of Heberden or Louis, than if the description and fact were conveyed in the choicest phrases of the lecturer or writer at the time."

Researches on the Motion of the Juices in the Animal Body. By Justus Liebig, M. D., Professor of Chemistry in the University of Giessen. Edited from the Manuscript of the Author by William Gregory, M. D., Professor of Chemistry in the University of Edinburgh. 8vo., pp. 109. London, 1848.

We think that Liebig has some reason to be dissatisfied with the anxiety of certain of his friends, and especially of Dr. Gregory, to act as gentlemen ushers to every investigation, crude or trite, into which he may enter; but if he be satisfied with them, we are not so with him; inasmuch as we think such publications as the one before us, and his "Researches on the Chemistry of Food," are better fitted for the pages of a periodical. They certainly—if valuable—will be attainable by a much larger number of individuals than can now read them. It is true they have been reprinted in this country by Professor Horsford, of Cambridge, at a comparatively cheap rate, but still their circulation cannot but be restricted.

The work before us contains the results of Liebig's investigations on endosmosis; but we see nothing or little that is novel in the results at which he has arrived. From these results Dr. Gregory states "the reader will," he trusts, "be satisfied that the motions of the animal juices depend on something more than mere endosmosis or exosmosis; and that the pressure of the atmosphere, as well as its hygrometric state, by influencing the transpiration from the skin and lungs, are [is] essentially concerned in producing these motions." Doubtless, these are important agencies; but they are of limited operation, and have an undue weight assigned to them by Liebig; and so we would say have the forces invoked by Professor Draper as concerned in the motion of the blood. Most physiologists—Dr. Draper properly remarks—have regarded the hydraulic action of the heart as amply sufficient to account for all the phenomena. "It is now," he adds, "on all hands conceded that this organ discharges a very subsidiary duty." Such is not our impression. We admit that numerous sources of motion exist; but we cannot regard the action of that powerful muscular organ which possesses an active power of contraction and dilatation as "very subsidiary" in the circulation.

On the contrary, we esteem the forces in the motion of the juices invoked by Liebig as well as those by Dr. Draper, to be altogether ancillary to the great source of movement.

"From what has gone before, it can hardly be doubted," says the former, "that one of the most important functions of the skin consists in the share which it takes in the motion and distribution of the fluids of the body. The surface of the body of a number of animals consists of a covering or skin serviceable for liquids, from which, when, as in the case of the lungs, it is in contact with the atmosphere, an evaporation of water, according to the hygrometric state and temperature of the air, constantly goes on. If we now keep in mind, that every part of the body has to sustain the pressure of the atmosphere, and that the gaseous fluids and liquids contained in the body oppose to this pressure a perfectly equal resistance, it is clear, that, by the evaporation of the skin and lungs, and in consequence of the absorbent power of the skin for the liquid in contact with it, a difference in the pressure below the surface of the evaporating skin occurs. The external pressure increases, and in an equal degree the pressure from within towards the skin. If now the structure of the cutaneous surface does not permit a diminution of its volume, a compression (in consequence of the loss of liquid by evaporation,) it is obvious that an equalization of this difference in pressure can only take place from within outwards; first from within, and especially from those parts which are in closest contact with the atmosphere, and which offer the least resistance to the action of the external pressure. Hence it follows, that the fluids of the body, in consequence of the cutaneous and pulmonary transpiration, acquire a motion towards the skin and lungs, which must be accelerated by the circulation of the blood." p. 74.

But we must leave those who are anxious to pursue the subject to refer to the translation,—not the clearest, by the way, in language, and a part of this, perhaps, applicable to the author.

A Practical Treatise on Poisons: their Symptoms, Antidotes, and Mode of Treatment. By O. H. Costill, M.D. 18mo., pp. 160. Grigg, Elliott & Co. Philadelphia, 1848.

In offering this Treatise to the profession, the author modestly disclaims all pretension to originality; but as the works which for the most part contain the information embodied in it are chiefly occupied with subjects of jurisprudence, they are from their size "somewhat inconvenient as books of reference for practical purposes." From the infrequency of cases of poisoning, the author observes, "the antidotal or general treatment of such cases" cannot be as familiar to the physician as the management of diseases which he is daily called to attend, "yet when such cases do occur, he is summoned in haste, and expected to act with promptness." Dr. Costill's object has been to supply "a small manual containing the symptoms and treatment of poisoning, which might be referred to in a few minutes," and thus save precious time, as well as much embarrassment to the practitioner. The object is a laudable one, and the general plan of the book is good, but we regret to find numerous evidences of hasty composition in so small a book, and on a subject in which accuracy is particularly important. The very title page is sadly marred in this way. The author, we dare say, did not mean to call it a Treatise on the *Symptoms of Poisons*, and the *Treatment of Poisons!* In the names of the poisonous articles enumerated, too, some confusion exists: thus—Turpeth Mineral is called the "Sub-Sulphate or *Peroxide* of Mercury." (page 55.) "*White Precipitate*—Ammonia, Chloride of Mercury." (p. 61.)

In speaking of poisoning with Iodide of Potassium, it is simply said, under the head of *Treatment*, "There is no antidote to this poison. It should be removed as speedily as possible by the *stomach-pump.*" But suppose there is no "stomach-pump" at hand, as is very likely to be the case, is there nothing to be done?

We have likewise observed that the names of some of the authors quoted are very curiously spelled; but this is of less consequence.

We do not mention these inaccuracies and omissions to con-

demn the book, which is really what it professes to be—a useful manual—but to impress on the author the necessity of a careful revision in a future edition.

THE MEDICAL EXAMINER.

PHILADELPHIA, AUGUST, 1848.

CHOLERA.

We extract the following notices of the progress of this pestilence from Wilmer and Smith's European Times, and other papers received by the last arrivals from Europe. The Medical Journals are considerably occupied with the subject, but coming out at longer intervals, they do not contain the latest intelligence of its progress.

"Letters from Bucharest of the fifteenth (of June) announce that all political affairs are suspended on account of the cholera, which has raged there with virulence for the last five days; since the seventh of the month about 160 persons had been attacked daily, of whom 50 had been carried off.

It has been found necessary to decree a general closing of the courts of law throughout Moldavia and Wallachia, in consequence of the fatal ravages which the cholera is making in these principalities."

Letters of a recent date from St. Petersburgh say that the disease has broken out in that city in a violent form, invading alike the palaces of the rich and the houses of the poor. "The malady broke out in the Russian capital on the 24th ult., and an immense number of patients have already succumbed beneath its virulence.—Six hospitals have been prepared for the reception of cholera patients alone. In Moscow the pestilence is decimating the population. In two days (the 11th and 12th of June) of 222 patients, 122, or more than one-half, succumbed; it is affirmed, moreover, that the disease has declared itself in twenty other governments or districts in the southern part of the empire."

The following is the St. Petersburg Bulletin of the first of July:

Remaining sick from last report, - - - - -	1459
New cases, - - - - - - - - -	719
Cured, - - - - - - - - -	41
Dead, - - - - - - - - -	350

The account adds—"The disease has manifested less intensity this year; it is more easily avoided, and the cures are more numerous. The victims are among the poorer classes, who will not abstain from green fruits and vegetables."

Although the progress of the disease excites far less alarm in Europe than on its former appearance, if it shall continue to spread, it will prove to be the great pacificator; it will do more than armies to allay the fierce political struggles that are now agitating Europe.

EXTENSION OF THE LECTURE TERM.

A good deal of misapprehension seems to prevail as to the action of the American Medical Association on this subject, at the meeting held in Baltimore in May last. The June number of the Western Journal of Medicine and Surgery, in a report of the proceedings of the Associ ation, contains the following remarks on the subject:—

"Dr. Wellford, of Fredericksburg, Va., now proceeded to read th report of the committee on Medical Education, of which Dr. Stevens was chairman. The report was accompanied by a number of resolutions, three of which had an important bearing on Medical Schools, and in substance are as follows: 1st.—That the plan of education in any Medical School must be considered radically defective, which does not embrace anatomical dissection by the pupils, and clinical instruction. 2d.—*That it be recommended to Medical Schools in the country which have not already done so, to extend their sessions to five months.* 3d.—That it be recommended to the Faculties of the several Medical Schools, to associate with them, in the examination of their students for the doctorate, a number of physicians not connected with the schools.

"The first of these resolutions passed unanimously. The second was adopted with little division, although it is known that not a few gentlemen in the Association, connected with Medical Schools, question the policy of lengthening the lecture term."

The Buffalo Journal for June 1848, contains the following, on the same subject:—"At the last meeting of the Association, as we learn, this subject (lengthening the term) was reconsidered, and it was concluded that, for the present, it was advisable to recommend an extension to five months only."

Although present at the meeting when the report was made we took no notes, but we were strongly impressed with the same view of what occurred as our contemporaries, and accordingly, having occasion

to allude to the subject in our last number, we mentioned that the report of the committee on medical education recommended *five* months, which was concurred in by the Association. We have ascertained, however, that we were in error. We learn from Dr. Stillé, Secretary of the Association, that *five* months is not recommended either in the report of the committee or the resolutions passed by the Association, so that there has been an entire misconception on the subject. The fourth resolution, submitted by the committee and adopted by the Association, reads as follows:—"*Resolved*, That this committtee reiterate and strongly recommend to the Association, a practical observance of the Resolutions appended to the Reports of the Committees on Preliminary Education, and on the requisites for gradution, submitted to the Medical Convention which assembled in Philadelphia in May 1847."

Desirous at all times of being right, we take the earliest opportunity of correcting our own mistake, as well as the misapprehension of our brother journalists on this point.

RECORD OF MEDICAL SCIENCE.

Purulent Ophthalmia. By Dr. E. G. Meek, late of Chocktaw Agency, west of Arkansas.—It is needless to go into any statistical or historical notice of this pestilent malady. A disease so rapid in its progress and destructive in its consequences, has, doubtless, been a matter of careful study with every intelligent member of the profession. The writer proposes to give such facts as came under his notice, and his deductions therefrom, during a visitation of this terrible scourge, in the winter of 1847—8. The weather, during the winter, was unusually mild and temperate; so much so that vegetation had made some progress as early as the 1st of February. The first case of ophthalmia in the neighborhood occurred about the middle of January, and the epidemic was at its highest on the 1st of March, from which time it began to decline, ceasing almost entirely the 1st of April. The great majority of the cases were Indians. From a record of more than sixty cases, the following are presented, with the hope that they may prove interesting to the older practitioner, and instructive to those who, like the writer, have been but recently freed from their professional leading strings.

A stout lad was attacked with inflammation of the conjunctiva, a sense of heat and smarting in the eyelid, and a deep-seated pain in the

orbit. On the following morning I was summoned to see him, and found the lids and integuments so much swollen as to render it difficult to obtain a view of the eye-ball; the lids were glued together, except at the inner angle, from which pus was discharged. He persisted in attributing his disease to having got sand in his eyes, and insisted that if this were removed he should be well. He was bled freely from the arm, his eyes cleansed with tepid water, and a solution of the nitrate of silver, of the strength of four grains to the ounce of water, was left, with directions that the eye should be washed with it once every three hours. On the following day, the severity of the symptoms was but slightly abated, and recourse was had to a second venesection; the solution being continued as before. On the third day, blisters were applied to the temples, and the patient gradually recovered, but so slowly that I had reason to be dissatisfied with the practice resorted to in his case, and resolved to alter it should opportunity occur. During his convalescence, two other lads were attacked in a similar manner; one of them in both eyes; the other in one only; both of them were bled to the verge of syncope, with immediate relief to their eyes; the strength of the caustic solution was increased to six grains, and the patients were briskly purged with calomel and sulphate of magnesia. On the subsequent day, the severity of the symptoms was materially lessened; the venesection was not repeated; the calomel was omitted; the solution was continued as before, and the sulphate of magnesia administered at bed-time. These boys recovered more rapidly than the last mentioned, although their attack was regarded as equally violent.

The following case is detailed as presenting more points of interest than either of the foregoing. Mrs. H., an old half-breed lady, and exceedingly corpulent, had previously had an attack of ophthalmia, which resulted in total disorganization and destruction of the right eye; she having failed to apply in time for relief. On the present occasion she became alarmed, and applied for relief in good season. I found her with the integuments much swollen, palpebral conjunctiva intensely inflamed, and the sclerotica a complete net-work of injected capillaries; pus was profusely discharged; there was deep-seated pain in the orbit, and a distressing throbbing of the temple; there was but little fever or constitutional disturbance of any kind. It may be well to remark, that the appendages of the disorganized eye were not affected. Now, here was a violent case, demanding prompt and efficacious treatment, while a want of success would leave the unfortunate patient in total darkness. To put a lancet into her arm with the view of drawing blood, was going on a very uncertain voyage of discovery; for, where there was not the least trace of a vein to be seen—as was the case in her gigantic arm—venesection was an operation to be performed—with reverence be it spoken—by faith and not by sight. In this dilemma her temple was scarified, but from some cause it did not bleed freely, and two cups were applied to the back of her neck, from which nearly a quart of blood was rapidly abstracted with a remarkable relief to the patient, the pain in the eyeball being

mitigated, and the engorged capillaries relieved of a great part of their contents. With some hesitation I then prepared a solution of the *argent. nitras*, of twenty grains to the ounce, and dropped a few drops in at the internal angle of the eye. The effect was to change the colour of the lining membrane from vivid red to white; and that without causing any great pain to the patient, who described her sensation by remarking that her eye felt as though it had been eating green persimmons. On the following morning the solution was repeated, causing a much greater degree of pain; the eye having become sensitive, and having undergone a remarkable change for the better. On the following day the improvement still went on rapidly; the strength of the solution was reduced to ten grains, and I ceased my attendance; the subsequent recovery was prompt and complete. The satisfactory result in this case led me to the total abandonment of general remedies to combat a local disease, and, in subsequent cases, induced me to rely wholly on the scarificator and nitrate of silver, to the exclusion of the lancet, blisters, and even purgatives, except so far as to maintain a soluble condition of the bowels.

In the following case the principal point of interest is the effusion of lymph into the anterior chamber of the eye, constituting what are usually denominated nebulæ in the cornea. The subject was a gentleman who was laboring under a severe attack characterized by the symptoms before enumerated, with the addition of three nebulæ in one eye, and two in the other. He was seen early; was at once freely cupped on the nape of the neck, and put on the use of the caustic solution of the strength of fifteen grains to the ounce. In two days the effused lymph was absorbed, and the cornea perfectly clear, without further medication. In his case, as in the last, the recovery was rapid and perfect. Several cases exhibited a greater or less degree of effusion into the anterior chamber; but under prompt treatment they proved quite as manageable as those which ran the ordinary course.

One more example is presented as possessing a painful degree of interest, from the suffering occasioned to the patient, and the melancholy termination of the disease. Dr. J. P. H., a member of the Royal College of Surgeons, for many years in the service of the Hudson Bay Company in his professional capacity, came to spend the winter in our pleasant latitude, and after some weeks spent at the place of my residence, took quarters at the distance of five miles, where he was attacked in the left eye, by the prevailing epidemic. He did not seek aid, and it was some days before I knew of his situation, when, waiving all ceremony, I went at once to see him. He removed from his lodgings back to our station; but it was unfortunately too late. He was cupped to the amount of a quart, and a pencil of caustic was applied to the inflamed surface of the eyelids, in addition to the use of the solution. This produced temporary relief, but in three days the symptoms returned, accompanied with an exquisite tenderness of the scalp on the left side of his head. He was again cupped, the caustic solution continued, and took thrice in the day the following mixture:

℞.—Liq. Potass. Arsen., gtt. xv.;
Tinct. Opii, gtt. lx.

Under this treatment the disease was again mitigated; but a worse symptom now appeared; the cornea commenced to ulcerate, and, during a night, passed by the unfortunate gentleman in great agony, burst; the discharge of the aqueous humour being succeeded by an interval of ease. Suppuration then set up in the interior structures of the eye; the vitreous humor and lens were, in this way, discharged, and the coats of the eye collapsed, completing the ruin of the unfortunate organ. But all was not yet over. The inflammation of the lids still went on, with deep-seated pain referred to the collapsed eye —distressing throbbing of the temple, and tenderness of the scalp. He was again largely bled—the arsenical solution was continued—blisters were kept open in the temple and nape of the neck, and the antiphlogistic regimen strictly observed. I suggested a trial of the influence of mercury; but this was declined. He improved somewhat, but still suffers great inconvenience, from which it will probably be long before he recovers; for, so far as my observation goes (and I have seen several instances), this disease, in a chronic form, is peculiarly intractable; and should the delicate structures eventually escape destruction, it will be at the expense of protracted suffering, and permanent inconvenience to the eyelids.

Many more cases illustrative of this malady might be given, but it is hoped the foregoing may be sufficient to give a correct idea of the diagnosis, prognosis and treatment; and it is now proposed to devote a small space to the *ratio medendi* of the course of treatment pursued in these cases. In the first place, as to the abstraction of blood. This disease is generally local, and it is believed that topical remedies are not only adequate to the emergency, but preferable to general measures, which produce inconvenience without corresponding benefit. The scarificator is, therefore, preferable to the lancet; because, in this way, blood is drawn away from the diseased organ more directly. It is true, blood may be taken from the jugular vein or temporal arteries, close to the seat of the disease; but these operations are attended with a degree of risk, which the inexperienced practitioner dislikes to assume; whereas the scarificator is, *at least*, innocuous in the hands of the veriest bungler; moreover, by dexterous management, enough blood can be taken in this way to produce the effect of a general bleeding. For the operation of cupping, the nape of the neck possesses advantages over the temple; but this is a matter of small importance.

The nitrate of silver combines two properties which render it the great remedy in ophthalmia; it is both stimulant and astringent. Modern researches into the pathology of inflammation, appear to demonstrate, that the capillaries of the inflamed organ become distended with blood, and that the distension destroys the tone of the vessels. Abstraction of blood empties them, and the nitrate of silver tends, by its twofold action, to restore their elasticity, and diminish their caliber; and the action of this remedy is a strong proof of the soundness of the prevailing theory of inflammation.

It is believed that active purgatives are unnecessary, and, therefore, improper. Emetics are thought to be injurious from their effect on

the cerebral circulation. The only local application (except the caustic) should be either cold or tepid water. Poultices of all kinds are inadmissible, as keeping the eye hot, and preventing a free discharge of secreted matter. The same remark will apply to shades and bandages for excluding the light and air. Air is not injurious; and the only proper mode of excluding the light, is to darken the chamber; care being taken to increase the amount of light as fast as the eye can comfortably sustain it, lest the organ by being long darkened should become inconveniently delicate, and be thereby liable to relapse after the patient goes abroad. During the acute stage of the disease, blisters are of no service; but are no doubt valuable when the disease becomes chronic, and to derive advantage from them, they should be kept open for a length of time.

In seeking for the origin and causes of ophthalmia, authors seem to agree that it came originally from Egypt, and that the dazzling light of the sun reflected from the sandy deserts of that country, have a very deleterious influence on the eyes. One author notices an opinion current in Egypt, that the moon's rays are quite as injurious as those from the sun. It is further supposed that this is a disease of warm climates, and this supposition finds support in the fact that destructive diseases of the eye, are less common in those latitudes where the ground is covered for a great part of the year with snow; although this would seem to afford a surface of quite as great a reflective power as the deserts of lower latitudes. With us, the great prairies offer a substitute for the sand plains; and when we add that, during the most intense heat of summer, the Indian traverses these great wastes with the head bare, or enveloped in a huge woolen shawl, we have a temperature sufficiently high for anything.

Medical writers have occasionally indulged in speculations upon the colour of the eyes that are most obnoxious to this disease, and have come to the conclusion that dark eyes are most frequently attacked; but this will seem a lame conclusion, when we reflect that the inhabitants of ophthalmic countries are very generally dark-eyed, and that it is difficult for any one but a lawyer to make a distinction where there is no difference. I will here, however, state a fact with reference to the colour of the eyes, which may interest those curious in such matters. In a family of my acquaintance there are seven children, four of whom have black eyes, and the remainder blue; the latter are short sighted, while the others exhibit no such defect.

It is a question whether or not ophthalmia be contagious. My own experience has left me but little doubt on this subject. It appears to me that there is as strong proof of the contagiousness of this disease as there is of the infectious character of small pox. A number of my patients were pupils in a public school, and the progress of the disease could be traced from chamber to chamber, and from one bed to another, and supervened promptly on the accidental application of the matters from a diseased eye. This will suggest the proper precaution to be adopted, and even should the practitioner be a non-contagionist, due precaution will be an error on the safe side.

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On malaria in connection with Medical Topography, by R. S. Holmes, M. D., of St. Louis, (late of the Medical Staff, U. S. A.)—The subject is one to which but little attention has been paid, whilst the cause of miasmata, (nearly assimilated to it) has given rise to innumerable discussions; in the Northern States, Medical topography, though highly important, does not possess that absorbing interest that is attached to it in the South. There the health and happiness of a family, or a community, often depends on the circumstance of the position with regard to some adjacent swamp, or river bank, or low, moist alluvial ground, or a high ground with an impervious strata underneath, or a profuse hummack growth of timber, or the sedgy margin of some half stagnant stream; it becomes a matter of momentous interest to ascertain in what direction in the summer months the winds blow, and to know what is the nature of the soil to windward. The rude and uneducated settler in Georgia or Florida, builds his cabin on the highest knoll in the pine groves, though all beneath is the white sand of the south. If you ask him the reason, he tells you it is healthier there, though he probably goes half a mile to his little plantation; nature has been his teacher in the matter, and although he knows nothing of the theory of miasmata, he is well acquainted with the proper practice in the case.

There are several general laws with regard to miasmata, one or two negative ones are all important:—it is heavier than air; it is capable of being carried by the air within a certain distance; moisture, a certain degree of heat, and a mineral or vegetable agent or agents are necessary to its production; it cannot be produced beneath a certain temperature, and can be produced without the presence of vegetable matter; these, are all, with the exception probably of the last, in general credence with the profession; there are some medical gentlemen, however, who are even yet sceptical on the subject of miasmata. I have heard it denied that there is such an agent; the heat of the sun, or reflected heat; electricity, the presence of minute animalculæ in the air, or of fungi floating therein, have all had their advocates; it may be possible that the two last agents are the generating causes of this universal disseminator of disease; to mention the others to persons who have really seen many locations of miasmata, would be but to abuse their patience. We hold that moisture and heat operating on mineral, or some mineral or vegetable products, are necessary to the constitution of malaria; and in living at many places that were hot beds of intermittent fever, of congestive and bilious fevers *et id omne genus*, we have always found these present. The question then is as to the topography of the soil giving rise to these three agents. Let us take first, the description of a place that by every apparent circumstance ought to have been healthy.

Fort Macomb, Middle Florida, had the reputation in 1842 of being the most unhealthy in the territory. It was situated on the Sawannee, a rapid and deep river, navigable for a hundred miles above its mouth; the river opposite the fort had scarcely a single weed or decaying vegetable in it; it flowed at the rate of two and three-fourth miles an

hour; its banks and bottom were formed of light granular disintegrating limestone, its waters were pleasant, had the taste of rain water, and like most of the rivers of Florida, were of a black colour, owing to infiltration at its source through pine and cypress roots; its banks did not shelve off gradually from the shore like most of the northern rivers, but became suddenly precipitous, and the river was often as deep five feet from the shore as it was in any part of the channel. I in vain endeavored to conjecture what could be the cause of the malaria so abundant about this Post; the quarters of the men were situated on a bluff thirty feet above the river, and about fifty feet from it. Among the soldiers the Post was called *The Hill*, and judging by the eye, I knew of no ground within many miles of it, which was of the same elevation. The river had been high, and its waters had been rising during nearly all the time we were at the Post; back of this Post, and around it, is a dry pine barren, extending for many miles, with not a marsh or anything approaching to the nature of one within four miles of the Fort, and then you meet with a small shallow lake, which, when its waters were nearly dry, might generate malaria, but it was at too great a distance, and the woods between it and the Post were too thick to lead one to suppose it was the source of disease. I had been around the Post for several miles in all directions; this pond, or lake, was the only one within that radius—even the hummacks on the other side of the river, of which there were two or three of a small size, were perfectly dry throughout their whole extent. The banks of the stream were high, nor did the river ever overflow them on either side. About the Fort, on the surface of the ground, the sand was almost a pure white, save here and there where some local causes had conspired to impart some fertility to it. The few dead branches of timber or decaying trees upon it were of the pitch-pine of the South, a tree that resists moisture and decay to a great degree, and which even in some cases seems to wear gradually away, more by the "soft handling of the elements" than by any cause of decomposition within. Speaking in general terms, there was no decaying vegetable matter about the place. A stranger would have said of it, "what a high, dry, and salubrious situation." Yet, even the *dogs* at this place had intermittent fever. I have repeatedly observed them; they would crawl out into the sun next the wall, become morose, chatter with their teeth, their whole bodies would quiver at intervals, and they would go through the phenomena of a regular stage of intermittent fever. I was ordered to this post in the month of December, when there was frost nearly every night. I had been but a few weeks in the Territory; I had come from the North, with a plus amount of health, and had never suffered from a day's sickness within my remembrance. Yet, ten days after I had set foot in this spot, (the thermometer during the day ranging from 45° to 80° and during the night from 29° to 45°), I was prostrated by a congestive fever, and for several days I vibrated between life and death, there were some sixty men there, some one-third of them in their beds in the hospital, and another third ailing in their quarters with *quotidian or tertian*

attacks of intermittent fever. Out of forty men who had been there the year before us, there were not men enough off the sick report to take care of the sick who were on it—it had previously been abandoned on account of the unhealthiness of the situation. For months I tried in vain to find out the cause of disease at this Fort. During December and January, and part of February, the quantity of rain that fell did not exceed an inch and a half, the ground on the surface was apparently dry and powdery, a great quantity of rain, however, had fallen in the previous summer.

I had observed that *fungi* flourished in great luxuriance about the Post—they were all, however, with one exception, of an unhealthy kind. I collected eighteen different specimens in a walk of two miles; one species grew very abundantly within some yards of the Hospital, and I was accustomed in my walk there, to make a detour to avoid this locality. This *fungus* had a most disgusting and nauseous odour, resembling more the smell of the fæces of a dysenteric patient than that of any other smell to which I can compare it; it was, I believe, a species of *Phyllus.* I have counted forty-two of these *fungi* within a space of fourteen yards square—the locality did not embrace more than an acre of ground, and was about a log building. The *fungus* lasts but thirty hours, but there was a fresh growth always on the spot, renewed apparently every morning. It is of a beautiful vermillion colour, save on the top, where a thick, black, molasses like secretion is deposited from the vegetable. So disagreeable was the smell, that where it was detected about a tent, or cabin, an active search was instituted, and floors raised, when the whole cause was often found to be but one *fungus.* I have never seen this fungus in any other place, North or South. As a general thing, it does not rain in Florida in the winter months. At Tampa Bay in December, January and February, of 1843, '44, the rain that fell only amounted to 5 7-10 inches, and that is a greater quantity than usually falls in those months, but fungi beyond all other vegetables require a great amount of moisture for their growth. Where then did they obtain it in this dry season? I was for a long time perplexed to find out, for I did not seek for moisture then in order to confirm any theory I had about malaria, but for the mere object of finding how those fungi supported their existence, and accident finally revealed it. The soldiers had occasion to sink a post into the ground near this locality, and I was surprised to find at the depth of two feet, a tough layer of putty-like clay, nearly as impervious to water as so much rock. I traced the stratum of this clay, and found it ran under the Fort, and for some distance beyond, at a depth varying from one to five feet; it had afforded the moisture indispensably requisite, I think, to the generation of that form of malaria producing periodic disease, but the vegetable matter, one other requisite according to the opinion of many, was undoubtedly wanting. This was not the only place, however, in Florida, where no decaying vegetable was present, and where periodic disease was rife. Fort Wacahoata, on the road from Pilatka, to Fanning, was in a high sandy pine barren, it was always esteemed

one of the most unhealthy in Florida. I have never been more than a few hours at it, and consequently am unable to give any proper account, save this negative one of its situation.

The first Post I was ordered to in Florida, was Wacassassa, it was flanked on the eastern side by an extensive swamp or wet prairie, of some fifty acres in extent. This was rather a startling neighborhood for the latitude of Forida, and like all others who had examined the matter, I came to the conclusion that health was not one of the advantages to be possessed at Wacassassa. The very appearance of the swamp was loathsome; the water did not seem to be more than two feet deep in any part of it. It was surrounded by tall pines and oaks, preventing the breeze from blowing over it freely; nearly to the centre, the long heads of heavy water plants were to be seen, whilst along the margin for the distance of several yards, up to the edge of the water, the land was boggy and covered with a profuse growth of plants to be more pregnant with malaria; the road ran along its border, and in that dry season (it was in November,) was wet and muddy. The fort was built some three or four hundred yards from the centre of this marsh, but the outhouses extended down to the edges of it, and the trees were felled to such extent as to leave an open space with nothing to interrupt the currents of air, blowing directly over it, to the Fort. The buildings were some eight or ten feet above the water, but Wacassassa was one of the most healthy places in Florida, it was seldom that more than three or four were on the sick report from a command of fifty or eighty men, and these cases were generally casualies or diseases not incident to the country, periodical diseases were really wanting. Yet, this place, apparently so unhealthy afforded convincing proof of some of the most popular of the laws of malaria, there were ponds in every direction from it, as well as this chief one I have mentioned, but they were never *dry*, although very shallow in depth, and spread over a considerable surface. From some unknown cause unlike such collections of water generally in Florida, they retained in the centre even the dryest season of the year, enough of water to keep moist the whole margin; and, consequently the plants depending for their growth on a large share of moisture, retained their life through the year and were thus kept completely from decay. On the year after the commencement of the Florida war, this pond became completely dry, and the whole neighborhood suffered from severe intermittent disease; since then no region in Florida had been more healthy, for the pond had not been dry. A few miles from this Post is Payne's prairie, in the months in which this prairie is overflowed, the country around is healthy; when the waters subside, the reverse happens in a lamentable degree. I knew no exception in Florida, to the rule that a body of lowland submerged at one season of the year, and dry the remaining time, did not produce many serious cases of diseases on its borders, extending from a few yards to three fourths of a mile from the point of origin of the malaria, according to prevalent winds and the nature of intervening objects.

Fort Fanning on the Sawannee, was during all seasons, extremely unhealthy, below it, and opposite, across the river, were large cypress swamps, with many of the trees growing; but in part, the swamp was so covered with the dead trunks, that it was possible to cross it in nearly all directions on these prostrate and decaying trees. On entering New Orleans for the first time by the way of Lake Pontchartrain, I was struck with the resemblance of the extensive swamp between the city and the lake to these cypress swamps on the Suwannee. This swamp extends to the suburbs of the city, and is, I have no doubt, the cause of the disease so prevalent in it. I was compelled again to pass through New Orleans last October, when the yellow fever was so prevalent. I entered the city by the way of the Mississippi, and with true delight saw that the wind was blowing from the south. I walked through its almost deserted streets without fear, and was not astonished, on enquiry, to find that the wind had continued steadily in the opposite direction to that in which it was now blowing for several weeks before.

Tampa in Florida was one of the most healthy spots in the Territory; there were no marshes within two or three miles; the land shelved down to the water's edge by a gradual descent, so that the drainage of the ground was complete, the timber was cleared off for some distance about it, and to the most critical topographical eye it ought to have been, and was healthy. But a trip on the Hillsborough river, a slugglish stream that flowed by it with banks low and marshy some distance up, was an excursion not to be undertaken on slight grounds; unless you had previously been inured to malaric influence. One of the worst cases of congestive fever I have ever treated, happened to a person who made an excursion some two or three days before up this river; having entered the Territory by the way of Tampa and the sea, and remained sometime afterwards at Tampa before making this excursion, in perfect health. I had never seen this disease, or intermittent fever, occur in those who remained at the Post.

At Key West there was a marsh in the middle of the town, and the inhabitants suffer from yellow fever. The sick were removed to the Indian Key, a coral island, some five hundred yards in diameter, and several miles from the first named Key.

At Fort White, on the Suwannee, another eminently unhealthy post, there was a large, moist hummack, immediately across the river, some thirty yards in width. Here vegetable decomposion was going on to a very great extent.

At Charles' Ferry, on the same river, the only healthy spot I know upon it, the country was cleared for some distance about the house, and the land dry in the neighborhood.

At Cedar Key was the general hospital for the sick; this was a very small island, some four miles from the mainland; the beneficial effects of a removal to a pure atmosphere were probably never more apparent than in the cases sent from the pestiferous airs of the interior to

this sea island; Sea-horse Key, in its vicinity, was also a depot for troops, and perfectly healthy.

In speaking of disease in Florida, and of these exhalations from swamps, from decaying vegetable matter, and from moist soil or sands were this matter was not present, I wish to be understood as referring principally to that form of malaria giving rise to *periodic disease* not only in the form of intermittent fever, bilious remittents, congestive, etc., but impressing its mark on every disease, that occurred in its locality. I have treated patients at Fort White and Fort Macomb, whose sole disease when asked what they were suffering from, I have termed the *malarial disease.* These men happened to be of that form of constitution which easily takes on malarial action, but in which every organ of the body was so nicely balanced that no one offered a salient point for attack; the nervous system was too well adjusted for an intermittent form of fever; the circulatory and nervous for a congestive seizure, and the chilopoietic for a bilious remittent; yet all three of these various actions would be disturbed—the appetite would fail, the slightest excess be followed by a deranged condition of the bowels: the strength so much weakened that a walk of a few hundred yards would be followed by prostration; the action of the heart would be so tumultuous and irregular, as frequently to induce the belief of severe lesion in that organ; any exposure to the sun would bring on a pain in the head; the body would become emaciated; the countenance sallow and cadaverous; if a whitlow or wound occurred in a patient of this kind, it would quickly take on regular periodic pains, yielding quickly to quinine. I have seen the heart in these patients so deranged that its flutterings could be easily perceived as you entered the hospital in the morning; and they have complained to me that, before "gun-firing" in the evening, they always had a chill. One of the worst cases of this disease I have ever seen, occurred in a young recruit, who had recently joined from the North. He was reduced to a shadow of his former bulk. I sent him to Cedar Key, and, some months afterward, being at the island, he came and spoke to me, as hearty a man as I saw on the island, and then employed as an attendant in the hospital. The cure was accomplished, as it only can be in these cases, by a removal from the cause of the disease. I am convinced there are few persons living in a highly malarious district, who do not suffer, for a time at least, from this malady. It is of many grades; and I have observed it, in officers, from depression of spirits, languor and lassitude, up to almost a complete cachectic disposition of body. This disease obtained, among the men, the name of "Suwannee Fever." But, although there were slight chills on almost any provoking cause, there was not generally any fever present, save when it assumed, as it occasionally did, a hectic form with night sweats. I immediately sent all these patients to the general hospital at Cedar Key, where they speedily recovered; but they they were generally useful in the Territory afterwards, and, in time, fell into the regular form of intermittent or other fevers.

The town of Pensacola was healthy; but the naval hospital, six miles from it, and the army barracks, or sheds rather, immediately in its vicinity, were very sickly—a marsh extended immediately in front of the hospital; and, by every fair mode of reasoning, it was generally considered the cause of the disease, so thoughtlessly, with regard to medical topography, was this hospital placed.

From Florida I went to Portland in Maine, a cold, bleak, unhealthy, but beautiful town. Its chief diseases, however, were those connected with the air passages from its immediate neighborhood to a stormy sea, and full exposure to eastern and northern winds, ladened with humidity; a stratum of a hard, slaty, gneiss-like character outcropping a great part of the surface, and nearly vertical, ran under the town and fort, and out to sea; it could be traced on land for moré than a mile in thickness; the ground was high, and the latitude and situation such as to afford an insufficient heat for the generation of malaria.

From Portland I was ordered in the summer of 1846, to Holton, in the northern part of Maine, near the boundary of New Brunswick, and in sight of Mars' Hill. Here all the diseases depending on malaria were wanting, owing to the situation and latitude, and the peculiar nature of the country. The Fort near Holton was some 800 feet above the sea, and considerably elevated above the neighboring country, yet the rarity of the atmosphere, or some cause associated with elevation and pure air, imparted a peculiar complexion to disease in this latitude. I have seen the same effects on the western part of the country, in nearly the same latitude and elevation. These effects are somewhat assimilated to chills, or fraisons rather, with no fever following. They would occur often at regular periods during the day, and when unaccompanied by other disease had only the effect of rendering the patient uncomfortable. I have, usually, easily dispersed them with quinine.

From the extreme north-eastern I was ordered to the extreme north-western part of the Union, to a post a few miles west of Prairie du Chien, on the upper Mississippi, in the latitude of 43 degrees. This town, for the last few summers, has been eminently unhealthy, a large proportion of the cases proving fatal, running into a typhoid type, but still with high symptoms of congestion and periodicity. It is evident that the extensive marsh, stretching in front of the town, through the meadows between it and the Mississippi, is the cause of the disease. So every boy in the village will tell you, while the surrounding country is eminently free from disease. West of it, on a high prairie land, at Fort Atkinson, where I was stationed, the men enjoyed most excellent health. The few cases on the sick report being those of casualties, or of diseases that occur in any climate, or under any sun. This region suffers much more intense heat than the corresponding latitude on the East. At Holton, I had fires daily during the month of August, and frost was common at night; but I have not felt, even at Key West, more extreme heat than occurs in the summer months at Prairie du Chien and in the region

of its neighborhood. North of this, at the falls of St. Anthony, in latitude 45 degrees, the Indians have suffered very much, within a few years, from the effects of malarious disease, and great numbers have died from intermittent fever. It seemed, when I was at this post, to be the general opinion that that fever had been known only among them within the last two or three years, at least it had never displayed itself in such violence as in these latter seasons. I am disposed to think some other cause was at work than the overflow of the Mississippi beyond its usual marks, for the periodic diseases have only, I am convinced, been common to the Indians of that neighborhoodwithin a very recent period.

Let us take a flight over to Mexico, and see the state of affairs there, not in a warlike, but a medico-topographical view. I landed at Brazos in May, and served for some weeks at Point Isabel, in sight of that island. Here a peculiarity was observed with regard to diseases of the intestines, and I doubt not many of those who have landed at the mouth of the Rio Grande or at Brazos have observed the same. I have seen it affect the men very seriously; but I do not remember a case immediately fatal from it, though I am convinced it often ran into chronic dysentery. This disease was a dysentery of a very light grade, and one which the constitution generally surmounted in the course of a week or two, unless under peculiar circumstances. It was evidently produced from some atmospheric cause, for humidity was present elsewhere as here, the same food and water as bad. I was attacked with this dysentery in two days after landing at Brazos, (or rather at Point Isabel, having gone over to the post immediately;) in ten days, with very little care, it left me. Abstinence and blue pill and opium, were generally sufficient for its cure; yet periodic disease, as far as my knowledge extended, was, I believe, unknown at that time in the neighbourhood. There are extensive flats in the vicinity of Point Isabel, constantly moist with the sea water, and large masses of sea-weed left exposed at low tide, often I am convinced in a state of decay from the beaming sun that came down upon them. From this post I was ordered to Monterey, and travelled to that city over the arid plains of Mexico, under the burning sun of June.

The want of rain, and consequently of moisture in the earth, will forever relieve the Mexicans from the curse of malarial disease, or of that form produced by exhalations from the earth's surface. I think it would be impossible for a country boasting of any vegetation whatever, to be drier than that between Camargo and Ceralvo. Even when you do occasionally meet with the course of a running stream, the water is often wanting, from the appropriation made of it by proprietors of land on its banks further up, who have drawn it all off for irrigating their lands. At Ceralvo you reach the spurs of the mountains, and water from their neighborhood becomes more abundant, though the land is still sterile and arid. At Monterey there is the bed, and occasionally part of the water of a large stream, and up the valley, at the distance of four or five miles, there is quite a volume

of water, but it is generally all drawn off before it reaches the lower part of the city, for irrigating the land about it, or the gardens of the town. The ascending valley, between Monterey and Saltillo, is unfit for all purposes of cultivation, and is sterile to a lamentable degree. I remember but one spot, at the Rinconada Pass, where cultivation, to any extent, has been attempted, and there the land is well situated for irrigation. Saltillo is on a high table-like valley, between two ranges of mountains. The largest encampment in northern Mexico being in its neighborhood, on the skirts of the battle field of Buena Vista, the diseases from which the troops suffered most were from fevers assimilated to a typhoid type, dysenteries and diarrhœas. The exposure to the heavy dews of night, the diet, and excess in it, so often committed by soldiers, drunkenness, depression of mind from home-sickness, and from inactivity and hope deferred, peculiarities in the hygrometric condition of the atmosphere, and exposure to the rays of the sun, were also the fruitful causes, not only of the first-named diseases, but also of all others lying dormant in the system. Any disease which, under more propitious circumstances, might have remained inactive in the individual for life, would be sure to give some sign, under these circumstances. This is a most prolific cause of disease in all armies, and, chiefly so, when the recruit is not compelled to undergo a rigorous examination before enlisting. The diseases generally originating from these causes, are probably most often intermittent fevers, phthisis pulmonalis, or other diseases of the lungs, mesenteric disease, the development of the scorbutic diathesis, or some taint in the blood showing its existence by ulcers; disease of the joints, &c., rheumatism, nostalgia, &c. This principle, of all others, I think has been at the root of most of the cases of disease that have occurred in Mexico. I remember, a few days after I was stationed at Saltillo, of being ordered on a medical board, to ascertain, if possible, the cause of the disease at the camp at Buena Vista. There were some 500 sick; 280, if I remember aright, of that number being from the Carolina regiment. This sick squad—or at least upwards of 200 of them who were able to stand on their legs, were paraded in front of the regimental tents. I think, to any one who had seen much of malarious disease and the appearance of its victims, the cause of all this sickness would have been at once apparent. The board had no understanding or conversation of any kind, and made no investigations on this matter before this time, and the majority of the board had only been in Saltillo some few days, yet the very first question that was asked to the first man in the squad, by Dr. Byrne, showed the secret of the whole matter, and I was struck with the coincidence of his views and mine on the subject. "Well, my man," said he, "you have never had the fever and ague?" "Havn't I!" was the answer. "I've had it since I was *so* high." It had left its indelible marks on his whole outer man. We questioned every man of the regiment who was sick, and there was but one conclusion that could be arrived at—they had nearly, to a man, been sick from this disease, or some one of a like nature, before enlisting. They had

generally been enlisted in a part of Carolina where miasmatic disease was very common; yet I do not remember of a single case of intermittent fever originating in Buena Vista or its neighbourhood, in which the disease had not occurred elsewhere in the individual. The astonishing tenacity of intermittent fever, and particularly its tendency to assume its empire again on account of the moisture in the atmosphere operating on the body, and from a multitude of other causes, are well known. I have known one case, in which it held its course, at intervals, for five years, the individual, within that time, having studiously refrained from approaching within any latitude or neighbourhood in which it was common; and, I am convinced, it often exists for much longer periods than this.

The encamping ground near Saltillo was on an inclined, rocky plain, about a mile from the foot of the mountain, with such an inclination that the water readily ran off. It rained here some three or four times in a week, from the immediate neighbourhood of the mountain, while in the town rain would fall but once or twice in the month. The mountainous ranges on either side, or the atmosphere about them, would form clouds, which were daily pouring forth their moisture, as you could see on their sides or summits, while the arid plains beneath would perish for the lack of water. Hence arose that peculiarity in the atmosphere which was so very prejudicial to health in Saltillo. The wind would come down from these mountains heavy with humidity, the sun would be obscured by the heavy, balloon-like clouds overhead, and perhaps a few drops of rain would fall, but generally the skies would become clear again in a few minutes' time, the sun would come forth with great power; the breeze would change, coming directly up or down the valley, with all its moisture absorbed by the arid plain it had travelled over. The nights were so cold and damp at the camp that two blankets were necessary, and overcoats in the morning, in the month of August, whilst the middle of the day was extremely warm. This was the history of nearly every day at Saltillo. Whether the state of the atmosphere, or some cause generated by it, or exposure, gave rise to the severe cases of typhoid fever and dysentery that were so common, I cannot say; but all diseases assuming a pure periodic type were wanting, save in those who had previously suffered therefrom.

That at the present hour we are close upon the discovery of what malaria really is, I am fully convinced. The investigations and theories of Liebig have pushed inquiries to the very door of this stronghold, so long closed to inquisitive, philanthropic, and scientific eyes. It remains for some future inquirer to lay open the subtle essence of this vigorous agent of death, which springs into existence in the noon-day. There is reserved for some coming investigator the glory of a discovery that will overtop in excellence all the results ever achieved by the labours of Jenner, of Watt, of Davy, Dalton, or of Franklin, to preserve the life, or advance the glory and comfort of mankind.

Very large portions of the earth's surface, and some of its richest

soils, are rendered uninhabitable from the presence of this scourge. It selects its victims from every age and sex, from all kinds and conditions of men. It has swept off, by a thousand fold, more victims than have ever perished by war or famine; yet it is subject to the most simple physical laws, and was never, surely, intended to be always hidden from our view.

The results at which I have arrived from my own observation concerning the nature and *locale* of marsh miasmata may be summed up as follows:

It is generated at least as far north in the United States as the 45th degree of latitude, in the north-western States, and probably not so far north in the north-eastern.

Frost does not prevent its generation.

It is heavier than atmospheric air.

It is capable of being conveyed across a stream of at least thirty yards in width.

It is most generally found associated with heat, vegetable decomposition, and moisture.

Heat, and the continued percolation of moisture upwards through soil or sand, although vegetable decomposition is not present, in a hot sun, is capable of giving origin to malaria.

Vegetable decomposition, or the percolation of moisture through soil from sea water, does not seem to give rise to malaria.

I have seen* no exceptions to the rules, that meadow lands, low, level, and moist in the summer months; that the extensive decay of vegetable matter, with the constant upward progress of moisture, or the continued percolation of moisture through soil, or drying of extensive flats or marshes, did not, under proper heat, give rise to malaria.

A great degree of humidity *in the atmosphere*, on land, under a hot sun, not alone capable of originating malaria.

The effluvia giving origin to bilious, typhoid, and yellow fevers, to dysentery and diarrhœa, would seem to be essentially distinct from that which causes pure periodic disease, such as intermittent fever. Cases of the highest grade of dysentery and diarrhœa, however, are often associated with intermittent fever, when occurring epidemically.

The atmosphere being the vehicle by which malaria is disseminated, it is capable of being conveyed by it for probably the distance of three-fourths of a mile, there being no intervening objects to obstruct the wind; that it is not disseminated *against* the wind is evident.—***St. Louis Med. and Surg. Journal.***

* I am far from asserting there are no exceptions to these rules, but I have not happened, as far as I can recollect, to meet with any, in a tolerably extensive experience.

PATHOLOGICAL SOCIETY OF LONDON.

Mr. Hughes Hewett exhibited a specimen of *Fracture of the orbit from a lead pencil.*—A child, two years old, fell on crossing the room with a lead pencil in her hand. The pencil penetrated the right orbit, having pierced the eyelid just below the supra-orbital ridge. The eye did not appear injured in any way, and there were no symptoms of concussion. Considerable force was required to extract the pencil, which had penetrated to the depth of about two inches. Fomentations were applied to the wound, which closed in twenty-four hours. The child ate its dinner much as usual soon after the accident, and slept well during the night. Next morning it was drowsy; it was seen for the first time by the medical attendant of the family, who applied a leech to the temple, and ordered calom. gr. ss. 6tis. horis. On the middle of the next day (the 3rd), she had a convulsion, twitching of the muscles of the face, legs, arms, &c., after which she rapidly lost consciousness, sight, and hearing. Mr. Hewett saw her for the first and only time on the fourth day; she was then lying on her back; her countenance perfectly placid; the right eye ecchymosed and closed, and a muco-purulent secretion was issuing from between the lids; there were frequent subsultus of the fingers and hands, sighing, and a peculiar clicking sound produced by moving the tongue between the lips; she could not be roused at all. (The calomel was stopped, having caused considerable diarrhœa). The pupil of the left eye was active, but acted quite independently of the stimulus of light: it dilated when the eyelid was suddenly raised. The left cheek became flushed, and the child was generally feverish towards night. Next day (fifth), she was in about the same state, excepting uncontrollable diarrhœa, and flushing of both cheeks in the evening. On the sixth day the countenance was cadaveric; she started frequently, picked the bed-clothes, and screamed occasionally when moved. In the evening trismus came on, with cough, difficult deglutition and respiration, almost constant convulsive movements, and drawing of the thumbs across the palms of the hands. For some time before death the right eyelids had been separated, and the eye was seen uninjured, and moving symmetrically with the other. She died early on the morning of the seventh day.

The head was examined. The arachnoid was healthy, but beneath it there was most extensive effusion of greenish yellow lymph, mixed with serum, filling up all the sulci, and in some places concealing the surface of the hemispheres; the arachnoid could be peeled from off it; it was found everywhere, except at the base. The substance of the brain presented nothing remarkable; there was no fluid in the ventricles. On raising the right anterior lobe from the roof of the orbit, its inferior surface was found to be in a softened, broken down, and pulpy state, and upon careful examination a tolerably distinct cavity was discovered, which had probably formed the cyst of an abscess. There was a fracture of the roof of the orbit, and a fissure running nearly from before backwards. The two pieces of bone

in the dry preparation were held completely *in situ* by dura mater and the periosteum of the orbit. On pressing the globe of the eye, matter flowed from the orbit through the fissure into the cavity of the cranium. The fissure was a little more than a line in width, and would therefore have scarcely admitted the blunt conical point of a lead pencil. It is probable, however, that its edges were separated to a much greater extent at the time of the accident, and were brought nearly in apposition again by the forcible extraction of the pencil.

Mr. Pollock exhibited a specimen of *Sloughing of the internal carotid artery caused by a red-hot poker.*—A man, ætat. 24, admitted into St. George's Hospital, under Mr. Cutler, on the 22nd of February, 1848.

On the 20th, while intoxicated, he placed the red-hot end of a poker between his teeth for some wager; whilst holding it he over-balanced himself, and falling forwards, the end of the poker was forced back into his mouth.

On his admission at half-past six p. m., the right tonsil appeared very sloughy, and externally there was much swelling on the right side below the jaw, and down to the neck; great difficulty in swallowing, and some dyspnœa. About ten o'clock the same evening, profuse hæmorrhage from the mouth, so that he was nearly suffocated; there was some oozing during the night. After the hæmorrhage, the pulse was hardly perceptible.

23rd. Coughed a good deal at intervals, and expectorated several clots of blood. About twelve o'clock in the day, there was another alarming gush of blood, which produced a cadaveric paleness of the face. At half past one p. m., a ligature was placed round the right carotid artery; there was hardly any blood lost on the occasion, but the pulse continued rapid, and he died at haf-past five p. m.

On examination of the body, it was found that the poker had passed through the right tonsil towards its upper part, slightly implicating the uvula on the right side; that it had produced a considerable sloughing cavity, which extended slightly outwards and backwards, and on passing the finger into this wound, the extremity of the transverse process of the second cervical vertebra was felt exposed. Tracing the branches of the right carotid upwards, it was found that the internal carotid ran along the wall of the cavity that had been occasioned by the red-hot poker, the portion of the artery next to the cavity being covered with sloughy tissues; but towards its upper part, and just previous to its entering the carotid canal, the inner surface of the artery was more exposed, and two small openings existed on this exposed part, one being above the other, but both close together, the coats of the artery at this point being of a sloughy appearance. The vessel was empty; the jugular vein was collapsed and empty; the ligature had been applied effectually on the common carotid, just below the point where it is crossed by the omo-hyoideus muscle; above and below the ligature there was a small coagulum. There was much œdema and effused blood in the upper part and right side of

the neck, and behind the jaw; together with much œdema of the fauces and upper part of the throat.

Wet Nurses and Lactation. By Dr. Schneider of Fulda.—Dr. Schneider inveighs strongly against corsets and other pectoral portions of female dress, as a great means of preventing females from making good nurses. The pressure on the breasts of young women weakens these organs, depresses and hardens the nipples, and obstructs the lactiferous ducts. It is, according to Dr. S., a very rare thing to find a perfect nurse. If we cannot be sure of finding an unexceptionable nurse, Dr. S. recommends Zwierlein's plan of taking a goat as a substitute. He has himself made upwards of thirty trials with children, whose mothers were unfit to suckle their offspring, and has in all of them obtained successful results by making the children draw the milk directly from the teats of the goat. No animal is so well fitted for this purpose as the goat. We are to select a young tame healthy animal, take care not to feed it too well, especially if the child is strong and plethoric, have it carefully rubbed down and cleaned, and give it frequently salt with its meat. A small wooden platform to which one or two steps lead, is to be erected close to the wall of the room; it must not be polished, that the animal's feet may not slide. To the wall, or to a beam of wood, a leather strap is fastened, which when the goat has mounted on the stage, can be easily secured round its neck, and to prevent its disturbing the child by moving backwards or forwards, its hind legs are to be secured in like manner. Lastly, at the end of the stage there is to be placed a tin dish with a cover, to catch any discharge from the animal.—*Prager Vierel-jahrschrift.*

Illustrations of the Contagious Nature of Puerperal Fever with Remarks on its Treatment, and on Contagion and Injection. By S. Beecrofft, *Esq., M.R.C.S.C.E., Hyde.*—I lay the following cases and remarks before the profession, from a desire to render my mite towards elucidating the true nature of contagious diseases. I think that of late there has been manifested a disposition to decry the influence of contagion; this probably arises from all epidemic diseases having been considered, by our earlier predecessors, to have been propagated thereby. I am afraid we are acting equally rashly with them, by rushing into the opposite extreme, and proportionally denying its agency. I do not apply such remarks to the class of cases I am about to relate, for I believe that most of us agree in the contagious character of puerperal fever, but I wish to show how careful we ought to be in refusing to acknowledge the influence of contagion. For some time it was denied to this class of diseases, and even now is by the French school. Not long since, there was the same disposition to deny that typhus was capable of being communicated by contagion, but I think, from the number of medical men who have lately fallen its victims, that question is finally set at rest.

I would state my opinion that all diseases originating from a pes-

tiferous virus entering into the body, and poisoning the blood, should be set down as capable of transmitting the same virus to others, and thus communicating the disease. I cannot see why the animal body cannot expel from it that which enters it, and thus become the medium of infection. And here I would observe that the distinction made by some of our medical authors, between contagion and infection, is unnecessary, for we know that the skin (though in a minor degree than the lungs) has the property of absorption, and therefore we must come to the opinion that infection may enter the body by contact. There can be no doubt that depraved food, bad air, want of cleanliness, &c., are powerful means of propagating epidemic disease; but I question if it is generally generated by these agents. It may be owing to our ignorace, that we lay such stress on these perceptible causes, and trust not the unknown, merely from not being able to detect them in our present imperfect knowledge of chemistry. The preceding remarks arose from reading that the Sanitary Commission had come to the opinion that cholera is not contagious, which opinion appears to me to be rash and not trustworthy, until we better know what the true principle of contagion is. Having already encroached much on the valuable space of THE LANCET, I shall condense the following cases, and therefore shall not enter into the symptoms of each case :—

CASE 1.—Mrs. H.——, aged thirty-four years, of a gross, lax, habit, troubled with erysipelas nasi, was delivered, after an easy labour of her fifth child, on Saturday, Nov. 28, 1846, (the night of a violent snow-storm, and when extreme cold set in.) She was seized with vomiting and purging, and died on the morning of the eighth day after delivery. I attributed her death to exhaustion caused by the vomiting and purging, which I thought was brought on by carelessness in living—taking fermented liquor, and eating goose, beef, &c., on the second and third days after delivery.

I had permission to make a post-mortem examination, which was instituted fifty-five hours after death, but it was not so minute as it otherwise would have been, from my assistance being urgently requested at the case of convulsions which I will shortly describe. The body was in good condition; redness about the nose, of a slight dingy hue; the right side was contracted; the lungs and heart were healthy; blood very dark and fluid; the stomach large, with considerable redness of its mucous coat, near the pylorus; liver enlarged, very dark, easily stripped of its peritonæl coat, and breaking up like a soft coaglum; gall bladder contained some dark fluid, similar to what had been ejected; peritonæum perfectly healthy; not the least effusion in the abdomen, nor any signs of inflammation of the peritonæum covering the viscera; bowels healthy, in some parts congested; kidneys healthy; uterus contracted, containing nothing, but its internal surface coated with a dark viscid substance; its walls were perfectly healthy, and I perceived no condition of any of the organs to account for death, unless it was the diseased state of the liver.

CASE 2.—Mrs. G——, aged twenty-six years, troubled with erysipelas nasi; delivered of her third child, labour easy, twelve P.M., Dec.

6th. She slept well during the night; in the morning, about eight o'clock, complained of headach, and soon after vomited some bilious, dark, looking fluid. At ten o'clock, after vomiting, convulsions set in, and my attendance was required, whilst making the previous post-mortem examination. Although active treatment was resorted to, the convulsions continued, and she died at ten P.M. the same day, twenty-two hours after delivery,

Case 3.—Mrs. B——, aged twenty years, healthy; delivered of her first child, at two A.M., Dec, 9th. Rigors came on during the following day, with well-marked symptoms of puerperal fever, and she died on the 15th, six days from delivery, pus being deposited in the shoulder and elbow the day prior to death.

Case 4.—Mrs. N——, aged thirty-one years; not well for some weeks; suffering from cough and occasional abdominal pains, which resembled those of labour; but for some days before labour came on she went about her usual household duties. I went with the husband from the previous case, and she was delivered after an easy labour, of her fourth child, about three o'clock the same morning. Puerperal fever came on, and she died on the 11th of December, the day but one after delivery.

I now thought the cases to be contagious, and did not attend another labour until the 20th. After using every precaution, I on that day attended Mrs. E.——, who did well, and Mrs. H.——, the subject of the following case:—

Case 5. Mrs. H——, aged thirty, suffering from varicose ulcer of the leg, surrounded with considerable redness, of an erysipelas nature, was delivered of her third child, after an easy labour on the morning of December 20th. On the fourth day after confinement, fever set in, and she died on the following Sunday, (Dec. 27th.)

Case 6.—I was called to attend Mrs. M——, aged twenty-seven years, of her third child. The child was born, and the cord divided, when I arrived at the house; and on placing my hand on the abdomen, the uterus contracted, and the placenta was expelled. Her sister, who lived in the house, was suffering from typhus; but this patient ailed nothing prior to delivery. Puerperal fever set in the day after delivery, and she died the same as the preceding case.

I now gave up attending midwifery, went from home for a time, and again attended a labour on January 16th, 1847, from which time to Jan. 31st I attended seven cases. Two of them difficult, and required turning, and the other the use of the forceps, which I employed for a medical friend. All of these cases did well. The weather had been warmer; but at the latter part of the month it became very cold. On the morning of January 31st I attended

Case 7.—Mrs. W——, aged twenty-five years; disfigured with erysipelas nasi, spreading to the cheeks; had seven rigors during labour, and chills the day previous; labour easy. Adynamic puerperal fever set in, and she died on the morning of February 5th, the face looking horrible from the extreme blackness of the erysipelatous parts.

I saw no more of the disease, though occasionally alarmed by rigors

following delivery, excepting an anomalous case which occurred to a Mrs. F——, who was delivered on the first of April, she having just recovered from fever. The woman did well for the first fortnight, but was forced to exert herself in her household duties, being unable to pay for a nurse. She sent for me on April 23rd, and stated that she had been out for a distance of two miles, the week before, and had not been well since. The lochia had not ceased, and for some days she said that the discharge was very copious and disagreeable. She was then suffering from phlebitis, a phlegmon existing over the right elbow and hip, and she died on the 29th, having every symptom of puerperal fever.

In considering over the preceding cases, I think there cannot be any doubt that a contagious principle was generated by Mrs. H.——, (the first case,) which was conveyed to my third case, and thus the puerperal fever was originated; and I cannot help thinking the second case (convulsion) had some connection with that of Mrs. H——. The third, fourth, fifth, and sixth cases show the contagious nature of the disease, and the seventh and last cases, also, that puerperal fever may be propagated either by direct contagion, or by atmospheric influence acting on those who may be predisposed to the disease. The prevalence of erysipelas at the same time, and the tendency manifested to it in the cases related, strengthen the opinion that puerperal fever and erysipelas are the same disease, one being capable of producing the other. The symptoms presented by these puerperal cases evidenced that the disease was dependent upon a poisoned state of the blood, and not in any particular organ. There were a small, feeble, and very rapid pulse, anxiety and a sense of uneasiness about the heart, hurried breathing, cough; in some of the cases, purulent expectoration, and profuse sweating. Some were troubled with vomiting and purging; no tenderness of the abdomen, but on pressing the uterus, which was rather larger than usual, pain was produced. There was no swelling or tympanitis when death took place within the fourth day; but in those who lived longer, the abdomen began to enlarge a short time before death. The lochia was deranged, and occasionally scanty, and in one case retention of urine existed. The cases were distinctly of the adynamic kind, presenting signs of a violent shock to the whole system. With respect to the treatment of such a form, (not puerperal peritonitis,) I should be inclined to follow the advice of those who do not recommend bleeding. I tried it in two cases, but it did no good. I would assist nature by acting on the principle of elimination. A mild emetic might be serviceable at the commencement by unloading the biliary ducts, followed by frequent doses of calomel; for I believe the liver is the most important organ to call to our aid in expelling the poison, and it is probable, from its office as a depurative of the blood, that it presents a morbid appearance after death, and thus in various diseases, (cholera for instance,) this has been said to be the cause, when it ought only to rank as the effect of the disease. Diaphoretics also might assist; Dover's powder I found useful in calming the patient

and relieving pain; indeed, every means of eliminating the poison from the blood might be employed, whilst at the same time the system must be supported by ammonia, wine, beef tea, &c.—*Lancet.*

Report of a case of Spontaneous Rupture of the Uterus before Labour. By Thomas F. Brownbill, Esq., Surgeon to the Salford Workhouse.—M. A. G——, aged twenty-eight years, was of rather short stature, well proportioned, and had a healthy appearance. She had been married about eight years. In ten months subsequent to marriage, after an ordinary labour of about nine hours' duration, she gave birth to a full-grown female child, which lived about four months. Soon after labour, which I understand was quite natural, she was seized with convulsions, followed by delirium, &c., which, continuing for a week or ten days, subsequently resulted in an attack of puerperal mania, for which she was afterwards admitted into the Manchester Workhouse. Here she remained about two months, and, as no improvement had taken place, was then sent to Lancaster Asylum, whence, having been confined seven or eight months, she was discharged cured; and from that until a recent period had enjoyed uninterrupted good health. Having been separated from her husband during most of the time since her last confinement, she again became pregnant, and was admitted into the Salford Workhouse on the 4th of November last, in order to lie in. She stated that, in the beginning of the seventh month of gestation, whilst hanging out some clothes, she received a fall, which shook her violently, but did not cause her, either then or afterwards, any particular pain. On the 20th of November, at six A. M., after having passed a restless night, with occasional slight uterine pains, she began to vomit. This was followed by several pretty strong pains, during one of which she experienced (to use her own expression) a severe crack in the back, with a feeling of something suddenly giving way in her inside, which was immediately followed by a discharge of liquor amnii from the vagina. The midwife (an intelligent and experienced person) was accordingly sent for, and was soon in attendance. She found, upon examination, the os uteri nearly closed, hard, and incapable of admitting the point of the finger. There was a slight discharge, of a dark brown colour, from the vagina; the patient had vomited the contents of the stomach; and the pains had altogether subsided. Under these circumstances, she left her, and found, on her return, at three P. M., she had had no pain during her absence. The os uteri was lower down, and more yielding, though not in the least dilated, and a slight discharge of water, tinged with blood, escaped whilst making the examination. She had not slept or felt the motion of the child since soon after the membranes broke. A dose of castor oil was now ordered. On visiting her the following evening, at nine P. M., at the request of Mr. Roberts, the governor of the workhouse, I found the oil had been rejected by the stomach, and the vomiting had more or less continued to the present time, the matter at first being of a greenish yellow, and afterwards of a chocolate colour. Labour had not in the least progressed, the os

uteri remaining as before, if anything, more contracted. She had no pains; complained of being weak and poorly; and although several opiates had at short intervals been administered, she had as yet not slept; and with a feeble pulse. Her countenance now began to assume an anxious expression.

Nov. 22d.—About eleven A. M. she began to doze for short periods, but this state soon gave way to extreme restlessness, almost incessantly requiring her position to be altered. She now complained of severe pain in the middle of her back, and her pulse was evidently sinking. Between one and two o'clock her breathing became laborious; her finger-nails had turned livid; continued gasping ensued; and in this state she died.

The body was inspected twenty-four hours after death, in the presence of several medical friends, and Mr. Roberts, the governor. The abdomen was found to contain a large quantity (about two pints) of dark-coloured, uncoagulated blood, probably diluted with a portion of the liquor amnii; and this being partially removed, the first object that presented itself, entirely excluded from the womb, and partially covered by the omentum and small intestines, was a full-grown male child, that had evidently been dead several days, the first stage of putrefaction having commenced. On partially removing the child, which lay with its left shoulder to the womb, a large rupture of this organ was observed, extending from the centre of the fundus, posteriorly, along its whole length as far as the os uteri, having only a narrow rim surrounding it, and through which the child had escaped into the cavity of the abdomen. The length of the opening was about seven inches, and the uterus, which seemed perfectly healthy, was well contracted over the firmly adherent placenta. In the above unfortunate case there are several points worthy of general notice, and which are of peculiar interest to the obstetrician. The patient was at the end of her calculation, and had a well-formed pelvis. The child was full-grown, of average size, also well-formed, and there existed between the two no disparity which would prevent the one easily passing through the other, supposing the presentation to be natural. From the time she first began to complain, up to her death, there was not the slightest pressure downwards; the os uteri was not at all dilated, and it firmly resisted the introduction of the finger-point, which effectually prevented my ascertaining the presentation of the child; nor was there any particular point or bulging perceptible in any part surrounding the os uteri, by which I could recognize its position. The The os uteri projected downward a little way into the vagina, and above it seemed to lead to an unobliterated cervix. Notwithstanding this state of things, from the total absence, since the first commencement, of anything like strong or bearing-down labour-pains, even at the time the waters escaped, it never occurred to me that the uterus had probably ruptured, which fact I first discovered at the post-mortem examination. The cause of the rupture is involved in much obscurity. She had not over-exerted herself, nor had she received any bodily injury since the time she fell; and the shake the fall occasioned was

not followed by any soreness or other inconvenience. Towards the end of gestation she was often low-spirited, and entertained a presentiment, to which she often gave expression, that she should not survive the birth of her child. There was no softening of structure in the uterus, nor any indication of previous inflammation. The surrounding soft parts were healthy. The usual predisposing and exciting causes were all absent. Even supposing there were malposition of the fœtus, that the wall of the uterus should be endangered from such trivial pains seems surprising. The case altogether is remarkable, and it presents an instance of the least frequent form, as I believe, of this lesion—viz., the longitudinal rupture of this organ, extending from the centre of the fundus, posteriorly, in a straight direction, to within half an inch of the posterior margin of the os uteri.—*Lancet.*

On the prevention of Uterine Hæmorrhage, arising after delivery, from atony of the Uterus. By J. Christie, M. D. Aberdeen.—Flooding is, at all times, a serious and alarming accident. Whether it occurs in the earlier months of pregnancy, in the latter, or subsequent to delivery, it demands the instant adoption of decisive means, in order to suppress it, or even to restrain it within the bounds consistent with the safety, and the future health of the patient.

In numerous instances it is obviously impossible to foresee its occurrence subsequent to delivery, consequently, preventive measures of a special kind, and having reference, by anticipation, to such an accident, is, in these cases, out of the question. But on the other hand, cases do occur where the anticipation of hæmorrhage is well founded, and then, the accoucheur ought to arm himself with, and put in force, all the resources of science, and all the appliances of art, in an effort to prevent it, from the instant that its probable occurrence assumes a tangible shape in his mind.

A labour may progress well, and its termination may promise a happy and unclouded issue to the thankful and delighted mother,—a promise also shared in by the accoucheur; yet experience tells us, that all these anticipations are often swept away in an instant, by the sudden and unlooked-for occurrence of flooding.

To foresee all such cases is utterly impossible. No experience, however great, or knowledge and observation, however profound on the one hand, or accurate on the other, can enable one to anticipate with certainty the sudden and dangerous loss of blood subsequent to delivery. There are, however, instances in which it is to be dreaded, even from the commencement of labour, and as the remarks I mean to present to the profession on this subject, will be confined to such cases, I quote the following one, taken from my notes of them, almost at random.

Mrs. S——, aged 38, a woman of a lax, leuco-phlegmatic habit of body, was taken in labour, early in the morning of the 24th December, 1847.

At ten o'clock I was summoned to her bedside; and, on making a vaginal examination, I found the os uteri enlarged to the size of a

crown-piece, soft, and very dilatable. The pains were natural and apparently sufficiently powerful, as, in the course of half an hour, the os uteri was dilated to at least twice the size already noted, and the bag of membranes had begun to press on the floor of the pelvis. But although everything was thus seemingly progressing towards a happy result, the woman herself expressed great anxiety as to the ultimate event of her labour, the dread of flooding almost completely unnerving her, although she confessed the labour was not in itself unbearable, or the subject of apprehension.

On enquiring into the cause of this dread, I learned that this was her seventh labour, and that the three immediately preceding deliveries had been followed by dangerous flooding, which, in each instance, had taken place after her medical attendant had left the house. Nothing of an unusual nature had marked the three first confinements. In her last confinement, the hæmorrhage had been very profuse; and it was only after the uterus had been emptied of large masses of coagulated blood, and stimulated to contract by the presence of the hand in its cavity, that the flooding was suppressed.

The habit of my patient, both in a physical and moral sense, clearly indicated under the circumstances described, the necessity of adopting means to prevent the recurrence of an event so much and justly dreaded; and which, there was every reason to believe, would as readily recur as on the three former occasions.

The first indication to be fulfilled was, obviously, to reassure my patient's mind,—to quiet the apprehension so conducive to the very accident which was the subject of fear; and, having, in some measure, succeeded in this, the second was to employ, *previous* to delivery, such means as were calculated to prevent hæmorrhage, by securing the firm and permanent contraction of the uterus in the accouchée.

The woman being of a lax habit of body, and the abdominal parietes in consequence relaxed, and moreover still further weakened by the repeated distension of pregnancy, the support of an abdominal bandage, even before the termination of labour, was an evident desideratum, and, therefore, it was at once applied.

The next object was to act, if possible, directly on the uterus, for although labour was progressing in the most favourable manner, so far merely as its mechanism was concerned, the almost certain occurrence of post partum hæmorrhage was to be provided against; and, to accomplish this, nothing seemed more likely than the exhibition of ergot of rye. As yet, however, it was not deemed advisable to administer it, there being nothing in the progress of the labour itself requiring its exhibition. The sole object was to secure the contraction of the uterus after the termination of the labour; and, accordingly, it was thought proper to delay the administration of the ergot, until the process of parturition should be so far advanced, as to promise a speedy issue in delivery. In the course of three quarters of an hour the distended membranes came to dilate the vulva; and, having ruptured during a pain, the head was to be felt in contact with the perineum. The next pain pushed the head so far down as to dis-

tend the perineum to a considerable extent; and, now, the labour being so near a termination, an infusion of the ergot, containing the bi-borate of soda in solution, was exhibited on the subsidence of the pain. In ten minutes the child was born; and in a quarter of an hour subsequently the placenta was removed from the vagina, where it had lain since the expulsion of the fœtus, the same pain that expelled the fœtus having thrown it off and expelled it from the uterus.

On placing the hand on the abdomen over the region of the uterus, it was found to be firmly contracted into a ball, as it were, about the size of the child's head. In two or three minutes it became softer and larger, but immediately afterwards it again contracted, and although this alternate state of relaxation and contraction continued for at least twenty minutes, the time during which the hand was applied to the abdomen, there was no greater discharge of blood than is usual. The hand was now removed and the abdominal bandage fastened firmly, a common towel folded two or three times on itself, being laid under it, and over the fundus of the uterus. Previous to delivery the bandage was two or three times adjusted and fastened, so as to support, without impeding, the action of the abdominal muscles.

The labour having so far terminated favourably, I remained in the house for an hour and a half, but on the expiry of that period, and there being no flooding, I took my leave, after having once more satisfied myself that the uterus maintained its contracted state, by examining the hypogastric region. From this time the case progressed most favourably, and the woman made a rapid and satisfactory recovery.

Remarks.—I could have easily cited a number of cases in proof of the efficacy of the treatment adopted in this instance, with a view to prevent hæmorrhage depending on atony of the uterus subsequent to delivery. But the case narrated involves everything of importance, in a practical point of view; and, to multiply illustrations of similar and equally fortunate results, could serve no other purpose than to repeat the same outline of leading facts, a course, to follow which, would be as useless as it would be tedious. It may be said, that even had hæmorrhage supervened, a fatal, or even a dangerons result, might not have followed, as, in most instances, flooding is amenable to the ordinary and established modes of treatment. But the object of my treatment was *prevention*; it was eutirely conservative in its nature; and, although, in general, flooding is controlled by active and decisive measures, I had no wish that my patient should run the gauntlet of a chance, where appearances were so much against her. Besides, had the means employed been of no service, they did not preclude the recourse, in the event of flooding, to other suitable aids in the suppression of hæmorrhage.

In another point of view the exhibition of ergot of rye in such a case appears to me to be most beneficial, namely, in not only preventing hæmorrhage, but, also, in preventing the severe after-pains, which almost universally annoy women who have borne a large family, and who, at the same time, are of a lax habit of body.

The *modus operandi* of the drug must, of course, be obvious to all; and, as it acts in preventing flooding, by stimulating the uterus to contract, it follows from thence, that after-pains are also prevented by the firm and permanent contraction thus induced.

The use of the bandage as a subsidiary means must also be taken into account; still, I am satisfied, from a tolerably wide experience, that the ergot is most to be relied upon. In fact, it is but seldom I apply a bandage, previous to delivery, although I am well aware it is the common practice of many experienced accoucheurs; but in cases similar to the one I have given, I have only in one or two other instances thought it necessary to use it.

I have often seen after-pains of the most severe and tormenting nature,—nay, I have even seen them merge in metritis—where the ergot was used in order to rouse the uterus to action, but this was in cases where rigidity or some other obstructive cause rendered labour tedious, and where the contractile power of the uterus was, as it were, worn out by the continued and *stormy* action it excited. Indeed, so much am I averse to the use of ergot of rye in exciting the uterus to action, that in most instances, especially in prima-paræ, I prefer the use of the forceps. Cautiously and tenderly used nothing can be safer, particularly if the mechanism of labour be *thoroughly* understood. But to digress on this point, would be to enter on a discussion more suited to an elaborate review of the subject, than to an incidental notice in a slight sketch of this kind.

Before concluding, however, I would express my conviction, that no greater boon could be conferred on obstetric medicine, than settling the value of ergot of rye, by a discovery of the cases where it can be appropriately and safely exhibited, both as regards the mother and child. Much as has been written on the subject, it requires an enlightened and patient revisal; and, I trust, the value and importance of ergot in obstetric cases, suited to its exhibition, will find a competent and favourably situated observer iu the ranks of the profession in Britain.—*British Record of Obstetric Medicine, &c.*

General observations on the Bronchitis and Pneumonia of Infants. By Ray Charles Golding, M. D., London.—The first period of human existence—viz., from birth to the seventh year—is characterized by greater energy of the nutritive processes than it obtains at any subsequent period of life.

The importance of the calorifacient function, and the depuration of the blood, for the uninterupted continuity of the nutritive processes, renders these subservient functions also very active during infancy. Disease is therefore more likely to supervene from slight causes, than at subsequent periods, where development being completed, reparation is alone necessary for the integrity of the various textures

The organic or vegetative functions being more active at this period than are the animal functions, another cause exists, wherefore diseased action should be more easily excited than in after life, where from the predominance of the animal functions, and the control exercised by

them over the organic functions, in health and disease, the predisposition is not so strong as it is during infancy, to the induction from trivial causes of diseases of the respiratory and assimilatory organs.

From this cause the mucous membrane of the bronchial tubes and the parenchyma of the lungs, are peculiarly apt to become inflamed; seeing that the pulmonary circulation is so active, and the quantity of circulating blood in the lungs so great, that the most trivial causes induce derangement of the circulation, with congestion or inflammation as the consequence. It is unnecessary to particularize all the causes producing these effects, further than to remark that the latter lesion—i. e. pneumonia—is usually superinduced on pre-existing bronchitis, when from any cause the bronchitis is prolonged, or the inflammation so exacerbated, that extension to the pulmonary parenchyma is the result.

Independently of the predisposition naturally existing during infancy to these diseases, the strumous diathesis, difficult dentition, and the presence of entozoa in the alimentary canal, may be cited as additional predisponents of frequent occurrence; whilst, the condition of the blood during or on the decline of scarlatina, measles, and small-pox, may be mentioned as specific predisposing causes.

In all instances, exposure to cold is the exciting cause of bronchitis and pneumonia. The inflammation in bronchitis occurring in children mostly affects the larger as well as the smaller bronchial tubes;—and when acute is attended with urgent dyspnœa and fever.

As the symptoms of, and physical signs elicited in, the bronchitis of infants, vary so much, and as there is often great difficulty in determining the exact amount of lesion present, I have endeavoured to systematize those phenomena—general as well as physical—which are most definitive, from possessing a directly practical bearing: they are as follows:—

1. The bronchitis of children may be acute, attended with copious purulent secretion, dyspnœa, and inflammatory fever: or, be mere congestion of the lining of the air tubes, with increase of their natural secretion, without fever or dyspnœa of any importance.

2. The degree of dyspnœa and fever present, vary much;—they are more intense the greater the vigour of the general constitution;—bronchitis in such cases is more liable to pass into lobular pneumonia, than is that form of bronchitis—though acute—occurring in strumous habits. The bronchitis of Measles and Scarlatina is attended with intense fever and prone to pneumonic complication.

3. Bronchitis is apt to become chronic in strumous children; and where a predisposition to vesicular emphysema exists, frequent bronchitic attacks during childhood is a most fertile source of that lesion.

4. The pneumonia occurring as the sequela to, or as an aggravation of the bronchitis in infants, is usually of the lobular form; the inflamed portions present changes, different in the several portions so circumstanced, (solid, from red or grey hepatization; soft, from the formation of pus, or from sparelus.) Sometimes the pneumonia is of the lobar kind, attended with the same morbid changes, and with

phenomena both general and physical, as in the adult: that following scarlatina and small-pox is usually of the lobar kind; in such cases, pleurisy is not unfrequent, especially when the inflamed portion is near the surface of the lung.

5. Expectoration is usually profuse and purulent, though swallowed, and sometimes vomited with other substances existing in the stomach at the time of ejectment.

6. The morbid appearances of the lungs and lining of the bronchial tubes have been described most beautifully by West, Rilliet, and Barthez: to the ordinary appearances of congestion and inflammation may be added, deposition of miliary tubercles in children predisposed to such deposition, and œdema of the subpleural areolar tissue, in cases where urgent dyspnœa has preceded dissolution.

7. The respirations are increased in frequency, often forty or forty-five per minute; the expiration is usually prolonged; the râles vary in character and degree of audibility according to the size of the tubes over which the examiner is listening, and to the quantity and consistence of their secretion: the following are the chief points of practical importance connected with the râles:

a. Although commixed, the varieties of the mucous and crepitating râles may with care always be discriminated.

b. Mucous râles indicate free effusion into, and thick consistence of the secretion in the bronchial tubes; consequently, more of a congested, than of an inflammatory condition of the parts elic ting them: if inflammation has been previously acute, it may be known to be resolving when such râles are audible.

8. Crepitating râles, large and small, indicate scanty effusion into the bronchial tubes, together with more or less complication of the pulmonary parenchyma: the secretion in these instances is thin. These sounds, mark either the commencement of inflammation, or such a congested condition of the parts yielding them, that antiphlogistic measures must be resorted to for their alleviation.

9. Mucous râles have always seemed to me to be most audible during inspiration: whilst crepitating are most so, either at the end of inspiration, or during the prolonged expiration usually present under these circumstances: this difference may be mainly due to the greater loudness of the mucous râles, during inspiration, than during expiration.

10. Nothing more will be said in this place on general or physical phenomena present during the bronchitis and pneumonia of infants, further than to state that a large portion of lung must be condensed by inflammation to elicit a readily appreciable dulness on percussion; inasmuch as the lungs of infants are so well permeated by air (except where a mechanical obstruction exists to its ingress) that a small portion of condensed lung is with difficulty defined. Blueness of the lips, with general pallor of the surface, indicate a degree of inflammation or extreme congestion; which, if not relieved, must terminate fatally. The prognosis of these affections in children is always uncertain: indeed no rules can be laid down with sufficient

accuracy to determine the point. There is so much reparative power in children that the most formidable symptoms may be present and yet recovery ensue; on the other hand, the most trivial cases of pulmonary inflammation may prove fatal, not so much *per se*, as by a sympathetic effect on the nervous centres, inducing convulsions, coma, and the like. So long as the cutaneous transpiration is kept up, and other organs remain uninfluenced, no apprehension need be entertained. But if the respirations become frequent, the surface pale and dry, the lips livid, and vomiting, coma, or convulsions supervene, the case is nearly hopeless; though even then, the efforts of the constitution, aided by diaphoretics and active purging, may be effectual in warding off the fatal result. Of treatment it is unnecessary to say much here; my only object is to remark on the efficacy of ipecacuanha, which I believe to be as efficacious as tartar emetic is in the allied affections of adults: acting in a similar manner, and may be given with the same tolerance of action as obtains with that heroic remedy. Children under twelve months will bear half a drachm of the wine every two hours: if the case is urgent, the same quantity every hour: above twelve months, one drachm may be given.

The first and second dose may produce vomiting: this however is of no moment; as the distressing effect of, and copious diaphoresis, the immediate consequence of that state will be attended with most beneficial results.

The medicine (as in the case with tartar emetic) is generally borne with impunity; producing no physiological effects, till, by its therapeutic action on the inflammation, that process has subsided: this is a good index of the state of the inflammation and a manifestation of the efficacy of the remedy for its removal.

Active purging, sinapisms to the thorax, and the warm bath, must be used as adjuncts: when convalescence is established the heat of the surface must be preserved by flannel being constantly worn next it.—*Ibid.*

ROYAL MEDICO-BOTANICAL SOCIETY OF LONDON.

Naphtha a cure for Cholera—The Elixir of Voroniej.—Mr. Guthrie, prior to reading certain communications which he had received from Circassia respecting the successful treatment of cholera in the Russian army in the Caucasus, observed that the authenticity of the documents which he was about to bring before the Society was undoubted, and that, as hitherto the profession had not entertained any definite views respecting cholera and its treatment, he considered it was highly satisfactory that a remedy had been discovered which exerted a specific action in this disease. This remedy was a singular one; it was naphtha exhibited in small doses of from ten to twenty drops, the dose being repeated if required, which was rarely the case. The naphtha that was used was not the naphtha of the shops—not the petroleum, or Barbadoes tar, but a pure white, or rose-coloured naphtha, which was employed without being subject to distillation. It was in all probability the mineral naphtha which was obtained

from Bakù, on the borders of the Caspian Sea. In order, however, to determine precisely the character and properties of this mineral, he (Mr. Guthrie) had sent to Circassia to procure some of it, and, as soon as it arrived, it should be placed in the hands of the secretary of the Society.

Mr. Guthrie then read extracts from letters from Dr. Andreyeoski, and from Prince Woronzow, the Russian Commander-in-Chief in Circassia. Dr. Andreyeoski says—"Naphtha, or petroleum, is not distilled, and the white is to be preferred; is an infallible remedy against the diarrhœa cholerica which prevails during certain seasons; and is given in the dose of from four to eight drops in a little brandy, white wine, or mint tea, taken cold. A single dose usually suffices to arrest the complaint. The evacuations, which in this species of diarrhœa are always liquid and glairy, become more solid, and less frequent. Sometimes the dose requires repetition at the end of two or three days. The diet should not be too strictly, but carefully regulated. In completely developed cholera of a deadly nature, from fifteen to twenty drops are to be given for a dose. If they are vomited the dose should be repeated; but a second is rarely required if the first be retained. It acts evidently on the skin and on the kidneys, and removes the cramps." In the first letter from the Prince Woronzow, dated Tiflis, March 1st, 1848, it is stated that "it is indisputable that most cholera cases begin with diarrhœa, and consequently, it is most important to act immediately and energetically against the first symptoms. The experience of the last year had proved, beyond a doubt, that naphtha was the best and easiest remedy in diarrhœa, whether it be simple diarrhœa, or the first symptoms of ensuing cholera. Dr. Andreyeoski thinks that the diarrhœa which precedes cholera is always without pain, and it is then that naphtha should immediately be resorted to; but in diarrhœa with pain in the bowels, he always employs opium. He first met the cholera last year at Tamikhan, where it prevailed to a very serious degree; the hospital he visited contained, the first day, more than 200 patients; the cases generally were very bad, and the mortality was great. On inquiry of the colonel commanding the Cossacks why there were so few Cossacks among the sick, he told them that he had made light of cholera, because they employed the elixir of Voroniej, which proved successful in almost every case. Andreyeoski immediately procured the recipe for the elixir, and on the first appearance of cholera in the convoy which accompanied the prince to the camp, he tried the drops with constant success. On examining the prescription, he found it to be a singular mixture of different matters, looking very like a quack medicine, but containing, among other strange, and, he thought, useless substances, some specific acting favorably in cholera, and he said that naphtha, one of the principal ingredients, might possibly be that specific. The stock of the elixir being soon exhaused, Dr. Andreyeoski determined to try naphtha alone, and, as he expected, it succeeded even in serious cases, but in mere diarrhœa the success was immediate. He had always, however, resorted to the elixir in cases to which he was apparently called too late—in

the blue stage, accompanied by cramps, &c.,—but even in many of these advanced cases, naphtha alone had proved successful. Several cases had occurred among the officers, who had been quite blue, and suffered severely, but they were quite cured by it. As to simple diarrhœa during the existence of cholera, there was not a single case in which naphtha did not effect a cure when resorted to immediately. One of the Circassian chiefs was suddenly seized with cholera before Dr. Andreyeoski could see him; he had been bled, and was in the last stage of the disease. He was ordered some wine, and had two doses of the elixir, which, with friction and warm clothing, restored him to health, though his convalescence was tedious. The naphtha must be genuine white, or rose-colored, not black, nor brown, nor distilled, as that would be much too powerful." The following is an extract from a letter from Prince Woronzow, April 18th, 1848:—"In sending you the promised prescription for Dr. Andreyeoski's elixir, I must add that he recommends frictions of every part of the body during a real attack of cholera, besides the use of the elixir, and warm baths also, to alleviate the cramps. It must be remembered, that in almost all cases the real symptoms of cholera are preceded by diarrhœa without pain, to check which the naphtha drops have been, beyond comparison, the most successful remedy. If cholera appear abruptly, Dr. Andreyeoski advises the immediate employment of the elixir. If this be not within reach, then resort to the naphtha drops, as well as the warm baths, and especially to vigorous friction, to restore the circulation. Dr. Andreyeoski deprecates all bleeding, and mercurial medicines. If diarrhœa with pain occur even in cholera times, Dr. Andreyeoski treats it simply with opium, not considering it premonitory of cholera." The following is the formula for the elixir of Voroniej:—Rectified spirit of wine, seven ounces and a half; muriate of ammonia, a drachm; purified nitre, a drachm and twenty-five grains; pepper, a drachm and twenty-five grains; aqua regia, half a drachm; wine vinegar, a pint and a half; naphtha, half a drachm; olive oil, half an ounce; oil of peppermint, seven ounces. Digest for twelve hours, and strain. Take two teaspoonfuls for a dose every quarter of an hour.—*Lancet.*

YORKSHIRE BRANCH OF THE PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

Local Effects of Chloroform and other Anæsthetic Agents.—Mr. Nunnelly stated that for many months he had been engaged in making experimental researches on these agents, with a view to ascertain, as far as possible, the modus operandi, the doses which may be borne with impunity, and the different modes of application; as well as in case of an overdose, the best means to be adopted to counteract it. His experiments have not merely extended to the common anæsthetic agents employed, such as ether and chloroform, but he has been endeavoring to ascertain whether or not there may be some others, which may either be more safely demonstrated, or may possess

still greater advantages than the usual agent employed; which appeared to him to be by no means impossible, inasmuch as, so far as he could ascertain, the selection of those now employed, rather than others, seemed to have depended rather upon accident than deduction from experimental research, proving them to be in all respects the best. He stated that he believed it not improbable that it would ultimately be found, that all those preparations which have a *radical basis*, (in the language of modern chemistry,) such as acetic ether, bisulphuret of carbon, aldehyde, and many others of an analogous character, upon some of which he had made extensive experiments, would possess similar properties on the animal economy.

Mr. Nunnelly was also prepared to state, *that chloroform appeared to be the most deleterious to life*, to require the greatest care in the administration, and that the boundary up to a fatal dose is by no means well marked—that of two animals in apparently the same condition, the same dose being given in precisely the same way to both, the one will speedily die, while the other will bear it with impunity,—that from the effects observed, he has reason to think the ultimate effects must be dissimilar to those produced by prussic acid,—that to some animals, as for instance the newt, the frog, the toad, some fish, slugs, snails, and some insects, the effects are *more* rapidly fatal than prussic acid of Scheele's strength; and that even in higher animals, when under the influence of an incomplete dose, or recovering from the effects of a large dose of ether, chloroform, or prussic acid, the phenomena are in many respects very similar,—and further, that the numerous *post-mortem* examinations which he has made, fully corroborated this opinion. He stated that acetic ether, with which he had made numerous experiments, possesses very considerable anæsthetic powers,—the bisulphuret of carbon does also possess to some extent similar power, and so far as his experiments go, it is very important to add, that this power is of a safe character, the animal speedily recovering. But of all these remedies he believes that sulphuric ether will be found to be the safest and least noxious to life.

On these points Mr. Nunnelly intends hereafter to lay his experiments, already very numerous and varied, before the profession. His chief object on the present occasion was to call the attention of the profession to experiments proving, as he thinks, the value and safety of a *new mode* of administering these agents, and to show that the action of all, or most of these agents might be produced *locally by local application*, the censorium being unaffected, consciousness being retained, and the limbs not subjected to their influence being unaffected. He stated that either by *immersion* in a small quantity, or by the *vapour applied* merely for a limited period, a limb may be rendered *perfectly motionless and senseless*, and what may be an additional advantage, *fixed in any desired position*. He had immersed his finger in these fluids for about half an hour, or an hour, and at the end of this period the finger was nearly powerless and insensible, and that it was forty-eight hours before the effects entirely disappeared, a sensation of heat and discomfort extending along the tract of the nerves to the

axilla. Before operating on a difficult case for artificial pupil, he had applied for twenty minutes a small quantity of the vapour of chloroform to the eye by means of a small jar which accurately fitted the orbit, with the effect of rendering the parts nearly insensible. The first effect of these agents when locally applied is to produce redness, heat, and smarting, which subside, followed by swelling and redness of the integuments, which remain for some time. Mr. Nunnelly stated that he could completely paralyse any limb of frogs or toads by immersion or exposure to the vapour, in about five minutes or less; and he mentioned, as a curious fact, that if the exposure to the influence were continued longer than was sufficient to produce a local effect, this influence extended to the corresponding limb of the other side: thus, for instance, if one hind leg became *too much* influenced, the other hind leg partook of the same effect—if the fore leg were too much affected, then the other fore leg became so likewise, and subsequently, the whole body—a result which Mr. Nunnelly mentioned as strongly corroborative of his experiments with prussic acid, as detailed in the last volume of the "Provincial Transactions," and strongly supporting the opinions of Dr. Marshall Hall on "reflex action." By this new mode of application to the hind legs of rabbits he had also been able to amputate the toes without the least indication of feeling.

These views were illustrated by a series of experiments on frogs and toads, in which, after immersion for a few minutes, the limbs became insensible, and were amputated in repeated portions without any symptoms of pain whatever.

[We are indebted to Mr. Nunnelly for the foregoing account, (taken from the forthcoming volume of Mr. Braithwaite's "Retrospect,") and also for a mode of performing the experiments on animals, from which the following is an extract:]—

"For showing the local effect, nothing is better adapted than the living leg or legs of a frog. All that is necessary is to put a few drops of the agent we wish to ascertain the effect of, into an ounce, ounce and a half, or two ounce vial, according to the size of the frog, having such a mouth as to receive the limb, and just fit around the upper part of the thigh, without, however, compressing it, and in order to avoid the vapour escaping, then passing round a few folds of a strip of linen or other bandage. If it is wished to see the effects of the vapour, the bottle should be sufficiently long not to allow the toes to touch the fluid, and the bottle should be kept quite still in an upright position; but if it be wished to apply the fluid itself, then the toes should touch the bottom, or the bottle be placed from time to time on the side in order to allow the fluid to pass over the limb, by which proceeding but little of the substance is required. At first the creature struggles, the fluid evidently acting as a stimulant, and at that time a little effort is required to keep it in position; presently it will remain *in situ*, for the reversed member becomes still and motionless. In from two to five minutes the full effect is produced, and the limb is perfectly insensible. If one leg be kept in too long, the

other hind leg is affected, or the whole body is brought under the influence of it; when the experiment is less satisfactcry, and the animal is liable to die. After the application the limb remains for some time swollen, and the colour of the skin is altered.

"In the case of other animals, the time necessary for immersion, before complete insensibility takes place, will vary with circumstances as to the temperature, but more especially the aptitude of the integument for absorption, and the nature of its covering. Thus, if the skin be hard, the epidermis thick, with the hair stiff and long, then a considerable period will be required. In the case of a rabbit, the other night, after an hour's immersion, I cut off the whole of the toes in succession, and then amputated the entire foot, cutting through the metatarsal, and then the tarsal bones, the creature lying upon my knees in the most quiescent state possible, there not being the least disturbance of the countenance during these operations. But the moment either of the other limbs were touched, and also what is of great interest, the *same limb above where the chloroform had reached*, it at once started up with every indication of pain, shewing how precisely the effect may be limited. The same operations I have also performed upon a kitten, and upon two dogs, (old;) these were, as might be expected after a similar length of immersion, though considerable diminution of sensibility was produced, not rendered entirely devoid of feeling.

"I may mention that to-day, (June 22nd,) I have operated upon a staphylatomatous eye, in a man from a distance, after the local action of chloroform, when I removed the entire cornea with a small portion of sclerotic coat and iris, with hardly any infliction of pain; and what is singular, so completely were the muscles of the globe affected, that for some time afterwards the remains of the eye did not collapse, although their attachments were not cut through. The fluid had been applied longer than necessary, or I had intended, as after having given directions for it to be applied until my arrival, I was detained away longer than I had expected.

"I have been making experiments upon two new agents, both of which I find to possess considerable anæsthetic property, and one of which I believe will prove to be superior in every respect to chloroform."—*Provincial Medical and Surgical Journal.*

MEDICAL SOCIETY OF LONDON.

Intus-susception.—In a discussion on a case of this nature, related by Mr. Hutchinson,

Mr. Pilcher referred to a case under the late Mr. Bryant, in which several feet of intus-suscepted intestine sloughed away, and the patient did well. He referred also to a case in which a boy, labouring under all the symptoms of intus-susception accompanied by a tumour, was successfully treated by thorough and complete distention of the intestines with injections of gruel. Mr. Pilcher advocated mechanical distention of this description.

Mr. Steadman said that this mode of treatment originated with Mr.

Finch, of Greenwich. Mr. Finch had tried it in three cases with complete success, and he (Mr. Steadman) had had similar success in two of his own cases.

Mr. Hird was sceptical as to the nature of these cases, and thought we were not always in a condition to decide whether there was intus-susception or not. Mercury was formerly recommended to be given by the mouth; now gruel was administered in enemata. He had examined persons who had died with symptoms, confidently believed to be those of intus-susception, and had found no such lesion.

Mr. Dendy considered that the signs of intus-susception were unequivocal during life—tenesmus, straining at stool, and bloody mucous motions. These cases frequently got well of themselves in the early stages. Portions of intestine sometimes came away, yet the patient got perfectly well in the early stage of the disease.

Mr. Hutchinson was certain from the first that the case he had mentioned was one of intus-susception. There were no signs of inflammation. He had given castor-oil three times a day with injections.

Mr. Pilcher stated that in his case, in addition to the other symptoms, the patient had continued vomiting, which had decided him in his opinion as to its being a case of intus-susception. He objected to introducing anything into the mouth, even gruel, much more mercury. He considered that the injections acted by forcing the bowel from the sheath when there was no adhesion.

Mr. Hird had no doubt of the frequency of the disease. In many cases supposed to be intus-susception, examination after death proved that there was none; but, on the other hand, intus-susception was often found where there had been no symptoms of it during life. Distention of the intestine in cases of inflammation was injurious, but in intus-susception it might be beneficial.

Mr. Lowe mentioned a case of obstruction in the intestine from ulceration, and in which recovery took place under the use of large doses of opium.—*Lancet.*

Indian Hemp; its Active Principle.—M. De Courtive has presented to the School of Pharmacy, Paris, a thesis on the Cannabis Indica, which attracted considerable attention. His inquiry was directed to it by the effects he noticed it to produce upon the lunatics in the Bicêtre. He has submitted the cannabis to analysis, procuring the plant from Algiers, or from Indian seeds reared in France. The active principle he states to reside in a resin which he extracted by a complicated process of maceration, and the action of alcohol. From nine to ten parts of this resin were procured from 100 parts of the plant, the larger proportion being furnished by the Algerine drug. He wishes to call the resin, cannabina, and states that one grain and two thirds, or even, in some temperaments, half that quantity, produced an equal effect with half a drachm of thick extract.

An alcoholic extract obtained directly from the plant may be

advantageously employed, but double the quantity must then be used at a dose, since the active principle is more mixed up with inert matters.

M. Courtive has experimented similarly with the cannabis sativa of Italy, and has thence extracted an active resin, which, however, requires to be given in four or five grain doses, to produce an effect. He considers the difference between the cannabis Indica and the cannabis sativa to be insufficient to distinguish them as different species, and in this he agrees with Dr. Boyle and others.

The resin extracted the author describes as deep greenish-brown; of an aromatic, yet nauseous odour: of a hot, acrid, and enduring taste; soluble in cold ether, alcohol, and volatile oils; insoluble in water and dilute spirit. It would appear to contain some fatty matter and chlorophylle.

The leaves are looked upon as the most active parts of the plant.

Indian hemp, we believe, must assume a much more important place in our list of drugs than it has as yet enjoyed; and if a resin of unvarying strength can be readily procured, it will provide us with a most eligible form of administering the drug.—*Lancet.*

Medicinal Employment of Gutta Percha.—Gutta Percha being very soluble in sulphuret of carbon, and the latter not losing any of its great volatility by the combination, M. Uytterhoeven, head surgeon of St. John's Hospital, in Brussels, is in the habit of spreading the mixture in its liquid state over parts which he is anxious to preserve from the action of air and water. Recently, an abscess resulting from caries of the ribs, after being emptied, was covered by a coat of this fluid, a small patch of court-plaster having previously been placed on the puncture. In this manner the inflammation of the parietes of the cyst was prevented, and the latter was emptied as often as accumulation of matter required. The same surgeon has employed the material, prepared in the manner mentioned above, to prevent the entrance of air into an articulation laid open by a wound. There is no doubt that chloroform might advantageously replace the sulphuret of carbon.—*Ibid.*

Regeneration of the Crystalline Lens.—M. Stromeyer has shown to the Medical Society of the department of the Upper Rhine, a lens regenerated after the operation of cataract. The patient died four years after having been operated upon. The organ reproduced was not exactly a lens, but a ring, perfectly transparent before its immersion in alcohol. The annular form is attributed by M. Stromeyer to adhesions between the anterior and posterior parietes of the lens, and he puts the question whether these abnormal adhesions, in the hope of renewed occurrence of such a regeneration, could not be prevented.—*Ibid.*

Political Distinction of Medical Men.—About thirty members of the National Assembly of France are physicians; of these M. Buchez, a distinguished writer, was the first President, M. Recurt Vice President, and M. Trélat, Minister of Public Works

In Prussia, ten physicians have been elected to the National Assembly recently organized; and in Italy, the Pope has appointed the celebrated Italian physician Farini, Under Secretary of State for the papal territories.

Ciliary Motion in the Pulmonary Mucous Membrane of Amphibia by Thomas Williams, M. D., of Swansea.—I have recently demonstrated, on repeated occasions, and in the most conclusive manner, the existence of ciliary motion over the whole of the internal superficies of the lungs, in the newt, frog, lizard, and snake. I find that in the batrachian, ophidian, and saurian reptiles, ciliary vibration prevails over every part of the true respiratory localities of the pulmonary membrane, as distinguished from that of the air-passages. In a subsequent communication, I shall endeavour to give a more extended account of my observations.—*Lancet.*

Hornet's Nest—Dr. T. T. Lockwood of this city, at a late meeting of the Buffalo Medical Association, stated, that, when practising in the country, he had frequently prescribed *hornet's nest*, as an antispasmodic, and that particularly in whooping cough, he had found it to exert more influence in controlling the paroxysms and shortening the duration of the affection, than any other remedy he had ever tried. We suggest the employment of this article, especially to our brethren in the country, where the article can be readily procured, in order that its therapeutical value may be more fully tested. Will some of our classical friends invent a classical name by which to distinguish it, in season for its formal induction into the Materia Medica?—*Buffalo Medical Journal.*

Singular cause of death!—The municipal regulations of the city of New York, require that the physician attending every case of disease, which proves fatal, shall deliver, in writing, a statement of the cause of death, for registration. The following has been handed us by a friend, who states that it is a literal transcript of the cause of the death of a patient, as registered, in the language of the medical attendant:—

"This woman was died, because she did die, and she was die of vickness and she could not live. DR. VANDERHIDEN.